Clinical Lecture

ON THE

HYDERABAD CHLOROFORM COMMISSION AND PROFESSOR WOOD'S ADDRESS ON ANÆSTHESIA AT BERLIN.

Delivered at the Afzal Gunj Hospital.

BY SURGEON-MAJOR E. LAWRIE,
PRESIDENT OF THE COMMISSION.

GENTLEMEN,—In the case of operation for the removal of the uterus and its appendages for sarcoma, which you witnessed, yesterday chloroform was administered, and the patient was kept fully anæsthetised for one hour and a half by Miss R. Furdonji, a fifth-year Parsi lady student, without assistance or interference from anybody. You are aware that, while I hold myself entirely responsible for the safety of my patients, chloroform is always given here by students with complete immunity from accidents, and you may find it difficult to understand why there should be any difference of opinion as to its safety. Unfortunately, a difference of opinion does exist, and it is my duty to indicate to you the fallacies contained in the latest addition to the controversy on anæsthetics—the address on anæsthesia at the Berlin International Congress. In the opening paragraph of his address Professor Wood says: "The death-roll of anæsthesia is daily added to—added to, according to my belief, at a rate that has not changed in forty years. Though this be true, from far-off Australia comes the news that judge and jury have condemned to heavy penalty a chloroformist who had lost his patient; and in England itself a well-known medical journal lends support to such a verdict by affirming that deaths from chloroform are preventable, that with due care they may be avoided, and that, therefore, when they occur they are the result of ignorance and carelessness. If this be true, five hundred deaths and more—the result of ignorance and carelessness! Five hundred surgeons, including such names as Billroth, Jaeger, Simpson, McLeod, Agnew, Hunter, McGuire, and others of equal rank, guilty of manslaughter! And still the carnage goes on." Professor Wood scouts the idea that all the deaths that have occurred from chloroform are due to ignorance and carelessness, and in a strictly limited sense he is right. The majority of the deaths from chloroform have been due to wrong teaching, and it is not the unfortunate chloroformist in far-off Australia who ought to be punished for losing his patient, but those leaders of our profession who, by their obstinate and persistent advocacy of erroneous principles, send forth from our medical schools year after year numbers of young medical men who are ignorant of the proper method of chloroform administration, and are confessedly unable to administer it with safety. A portion of Professor Wood's address consists of an attempt to divert the question of anæsthesia into a side issue on the qualities of different races of dogs; and he puts forward the amazing and ridiculous contention that the heart of a dog in India is much less sensitive to chloroform than the heart of a dog bred in northern climates. If this were true, it would only be necessary to raise the temperature of our operating rooms to 80° to ensure perfect safety. Operations must in future be performed in the hothouse, that is all. Professor Wood says: "Further, in a recent letter to me, Sir Joseph Fayrer affirmed the extraordinary safety of chloroform in India, and stated that he knew of no death from it as having occurred in that country, although its use is universal." Sir Joseph Fayrer left India in 1871. Since Sir Joseph left that country the old Scotch principle of chloroform administration which was in his time almost universal has been largely replaced by other principles, and several deaths have taken place. I know of six, and five of the six have occurred since 1879. Sir Joseph Fayrer's letter therefore merely confirms my opinion that the report of the Glasgow Committee, which was published in 1879, and was founded upon insufficient experiments, has done infinite harm, and is chiefly responsible for the fatality from chloroform during the last ten years. Dr. James Dunlop also states:[1] "Within the last ten years the deaths under chloroform in Glasgow have been more numerous than they had been in the previous decade."

Professor Wood next proceeds to re-examine the clinical facts. "If any credence is to be attached to the statements of competent witnesses who have recorded human deaths during anæsthesia, it is certain that in some cases under the influence of chloroform the pulse and the respiration have ceased simultaneously, whilst in other instances the respiration has failed before the pulse, and in still other cases the pulse has ceased its beat before the respiratory movements were arrested." Nothing is more certain, however, than that it is unsafe to attach credence to those whom Professor Wood styles the competent witnesses who have recorded human deaths during anæsthesia. The reports of chloroform deaths are utterly worthless and unreliable, because there is no independent person present who can take notes, and who will not interfere, although he sees the inevitable death approaching. Professor Wood then compares his clinical facts, which you now see are of no value, with the results of observations made on animals. He states that he and his colleagues definitely proved that in "the dog chloroform has a distinct, direct paralysing influence on both respiration and circulation; that the respiration may cease before the heart beat, or the two functions be simultaneously abolished; but that in some cases the heart is arrested before respiration. We have several times seen the respiration continue as long as one and even two minutes after the blood pressure has fallen to zero, and the pulse has completely disappeared from the carotid artery."

Professor Wood here makes the same mistake as was made by Dr. Lauder Brunton on the very last day of the Hyderabad Commission's experiments. No one who was present will forget the exciting scene when Dr. Brunton, who was watching the Fick manometer, called out that the heart had stopped, though the dog was still breathing. The excitement reached a climax when a needle thrust into the heart showed that it was beating vigorously; and we restored the animal easily. On another occasion everybody in the room thought a dog was dead when it was not. The fact that there is no carotid pulse is no proof that the heart has stopped. Professor Wood continues: "The correctness of our experiments we claim must be acknowledged. I do not desire to express any doubt whatever as to the correctness of the experimental data of Dr. Brunton. [Why not of the Hyderabad Commission?]. I simply claim that both sets of experiments, although they have yielded different results, have been correctly and properly performed." The results being irreconcilable, either the interpretation of the experimental data of Professors Wood and Hare or that of the experimental data of the Hyderabad Commission is incorrect. The question we have to decide is which of the two are wrong. Professor Wood asserts that his experimental data correspond with his clinical facts. But his clinical facts prove nothing whatever, except that, if part of the chloroformist's attention is devoted to the pulse in chloroform administration, deaths occur. Professor Wood's experimental data, like his clinical facts, do not prove that chloroform directly affects the heart. The cases he brings forward as instances of death from stoppage of the heart in animals are not supported by any evidence that the heart had stopped beating when he assumed that it had because the blood pressure was low and the carotid pulse could not be felt. We must have more information regarding Professor Wood's methods before we can accept his conclusions. He probably used a mercurial manometer. In our experiments the pulse was often visible on the Fick, or glycerine, manometer long after it had disappeared on the mercurial manometer; and the needle in the heart would beat long after the Fick tracing was reduced to a straight line.

The clinical facts which led to the formation of the Hyderabad Chloroform Commission are very different from those of Professor Wood. They consist of an almost unbroken series of 45,000 cases of chloroform administration, extending over forty years. In this long series of cases the chloroformists were guided as to the effect of the

[1] Vide THE LANCET of Sept. 27th, 1890.

chloroform entirely by the respiration, and there was not a single death. In strict accordance with these clinical facts the experimental data of the Hyderabad Commission prove (1) that the administration of chloroform is free from risk if the breathing is perfectly regular throughout and the inhalation is stopped as soon as the animal is fully under its influence; (2) that chloroform never causes death by sudden stoppage of the heart; (3) that death from chloroform is always the result of an overdose; (4) that the danger of overdosing is enormously increased by holding the breath, struggling, asphyxia, or anything which causes the patient or animal to take gasping inspirations; and (5) that the inhibitory action of the vagus nerve, which is called into play in threatened and actual poisoning with chloroform, is a safeguard. The safeguard action of the vagus was discovered by Dr. Bomford, and its true meaning was subsequently worked out by Drs. Bomford and Brunton, and no physiological discovery that has been made of late years can compare with it in practical importance. It was never mentioned or alluded to at the Berlin Congress.

We are now able to institute a comparison between the value of Professor Wood's clinical and experimental data and that of the clinical and experimental data of the Hyderabad Commission. Professor Wood's data lead to nothing more than an admittedly unsafe method of chloroform administration. The Hyderabad Commission demonstrates that by proper attention to the breathing chloroform can be administered with safety in any part of the world. No one is in a better position than I am to appreciate the worth and significance of the Hyderabad Commission's researches. For twenty years before the Commission was appointed I had given chloroform and taught hundreds of students to give it with unvarying safety. I took no part in Drs. Brunton's and Bomford's experiments, but I had the supreme satisfaction of looking on and watching the gradual development of the proof of the truth of Syme's principles. I now know scientifically what I knew before empirically, and it is difficult to over-estimate the difference. Formerly I taught my students to be on the alert for the warnings which are given by the respiration in chloroform administration, by which danger can be averted. We frequently gave patients over-doses, and were obliged to draw forward their tongues, or occasionally even to employ artificial respiration to restore them. I now teach you that the true art of giving chloroform, an art which any intelligent medical man can acquire, consists not only in concentrating your attention on the breathing, but in keeping it absolutely regular throughout the administration, and in stopping the inhalation whenever the breathing is irregular, and directly the patient is fully under the influence of the anæsthetic. We never have trouble now from over-dosing; you rarely see respiratory embarrassment in my operations, and during the last year, since the Commission completed its work, we have not had a case in which stoppage of the respiration has occurred. Professor Wood finds ether is as bad as chloroform in the laboratory. Clinically it does not kill so many people, because it is not pushed so far. In many cases, partial anæsthesia is considered sufficient when ether is used. Professor Wood has found out also that atropine, caffeine, and alcohol are not beneficial in chloroform administration, and that digitalis is. He has only to study our report and the vagus experiments to understand why. Anything which increases the rapidity of the pulse increases the rapidity with which chloroform is conveyed to the nerve centres, and if alcohol, or atropine, or caffeine does this they are bad. But alcohol does not always increase the rapidity of the pulse. Very often if a patient is frightened a small dose steadies and slows the pulse, and gives him confidence; and in so far as it does this, a preliminary dose of alcohol does good in operations under chloroform.

Before bringing this lecture to a close, I desire to call your attention to a paper by Dr. James Dunlop in THE LANCET of Sept. 27th, 1890, as it has an important bearing on Professor Wood's address. Dr. Dunlop's paper consists of observations on the administration and dangers of anæsthetics, in reply to THE LANCET'S circular calling upon scientific medical men throughout the world for information on the subject. Dr. Dunlop states that "the skilful administration of the anæsthetic includes *attention to the pulse*, as well as watching the respiration," and he gives numerous instances of death under chloroform from what he calls asphyxia and syncope. Dr. Dunlop's paper emphasises the truth of what I have already stated with regard to the worthlessness of Professor Wood's clinical facts, and it affords additional evidence that if part of the chloroformist's attention is devoted to the pulse in chloroform administration, deaths occur. It must be clearly understood what is meant by attention to the pulse in chloroform administration. Any surgeon who can give chloroform safely can keep his eye on the pulse. Towards the end of long operations I often ask my students, just as Mr. Syme used to ask me, "How's the pulse?" This is quite a different matter from watching the pulse for signs of danger from the anæsthetic—which is both unnecessary and dangerous. It is unnecessary because no reliable information as to the effect of chloroform can be obtained from the pulse, and it is dangerous because if ever the administration of chloroform is pushed far enough to cause the pulse to show signs of failure of the heart, the limits of safety have already been so far exceeded that a fatal result must almost inevitably ensue.

It is strange to find a surgeon of Dr. Dunlop's standing writing of deaths under chloroform occurring from asphyxia. The Hyderabad Commission has pointed out that the only danger of asphyxia, as of holding the breath, in chloroform administration, is that it makes patients gasp and so take in an over-dose with extreme rapidity. Dr. Dunlop asserts that deaths from syncope occur early in the administration of chloroform. He says: "A small quantity of concentrated vapour without any air administered to a nervous, timid patient has proved fatal. A healthy florid-faced young man had chloroform administered to him in private by a surgeon who had gained much experience of chloroforming in the wards of the Royal Infirmary. The chloroform was administered on a folded towel, three or four drachms having been poured on. While the patient was counting, and when he had reached the number twenty-five, his face became at once pale and blanched, the pupils suddenly widely dilated, and no pulse was felt at the wrist. The young man was dead." In order to understand the cause of the young man's death, you must consider Dr. Dunlop's account of it carefully, and remember that it is impossible to make any patient (or animal) inhale concentrated chloroform vapour without any air, unless you either cause him to gasp, by making him hold his breath or by asphyxiating him, or first render him insensible. From Dr. Dunlop's statement it is clear that the young man was made to count while the chloroform was held over his face on a towel. No surer method of making him gasp could possibly have been devised. Try it yourselves without chloroform, and tell me if counting and regular natural breathing are compatible. But with chloroform close to the face, it is certain that if you try to count you must gasp after every number, or after every few numbers. In fact, counting must lead to gasping much more quickly than holding the breath, because the lungs are emptied by the process. You remember a case which occurred here the other day. When a patient was nearly under chloroform he suddenly began to try to speak, and went on muttering "*er—er—er—er—er*" for a long time without taking a breath. I told the student to remove the chloroform cap from his face, as the patient was sure to gasp, and after a few seconds more the gasp came. Fresh air entered the lungs, and the patient recommenced breathing regularly, and very soon went over; but if the cap had been kept near his face, he would have inhaled a large dose of chloroform, and might have been at once poisoned. Substitute counting for the noise our patient made, and you have the true explanation of the cause of over-dosing and death in Dr. Dunlop's case. Dr. Dunlop says no disease was found in any of the young man's organs on post-mortem examination, and adds: "Strange as it may seem, disease of valves, hypertrophy of walls, cardiac murmurs of all kinds give no trouble during the administration of chloroform." According to this teaching, the more healthy a man's heart is the more certain he is to be liable to sudden death from syncope under chloroform; and if this is to become part of our belief, we shall soon have to refuse chloroform to anybody who has not a diseased heart. This is on all fours with the text-book teaching with reference to shock under chloroform. It is not the capital operations like amputations which are said to be dangerous from shock under chloroform, but only the trivial ones, like the operation for squint or for ingrowing toe-nail. In order, therefore, to make the operation for squint safe under chloroform, the patient ought first to have his leg off! You may believe me that there is no such thing as chloroform

syncope, and that all deaths *from chloroform* are due without exception to over-dose. You never hear of syncope except in the practice of those who do not know how to give chloroform with safety; and when once the truth is accepted, as it must be eventually by the whole profession, chloroform syncope will disappear into the region whence it came.

It is now time to ask what are the results of THE LANCET'S call for clinical experience. It seems to me that sufficient evidence of the most crushing kind has been accumulated in THE LANCET for 1890 to show that if the chloroformist's whole attention is not directed to the respiration, so as to keep it regular, deaths are inevitable. First, we have had the statistics of Mr. Roger Williams (*vide* THE LANCET, Feb. 8th, 1890), to show that one patient dies in every 1236 cases of chloroform administration at St. Bartholomew's and the other large London hospitals where the pulse is taken as a guide. Then we have Professor Wood's statement that "carnage" still goes on when chloroform is given in accordance with his own principles; and now we have Dr. James Dunlop asserting that the pulse must be attended to as well as the heart, and boasting that *only three cases* are killed by chloroform in Glasgow alone every year.[3] Why are we to continue to study only the experience of those surgeons who cannot give chloroform safely? Why does not THE LANCET ask the men who do not have deaths to give us their experience for a change? It is imperative that, in addition to clinical experience of the latter variety, THE LANCET should call for the opinion of the whole profession on the anæsthesia controversy. The report of the Hyderabad Commission was published in the leading medical journal last January, and many letters and criticisms on it have appeared since. A careful study of THE LANCET for 1890 will enable every general practitioner in Great Britain to form an impartial opinion as to the merits of the case. The votes of the majority will then decide whether the teaching of the Hyderabad Commission or that of Professor Wood is thought to be more likely to conduce to the interests of the profession and the public; and I have no fear what the verdict will be.

Finally, Dr. Dunlop states that "every intelligent assistant I have had *during the last ten years* has felt happier during an operation when ether was used than when chloroform was administered.' This is not at all surprising. No assistant can give chloroform happily or safely if he is always in dread that his patient may die suddenly. As long as the belief prevails that one of the dangers of chloroform is sudden death by stoppage of the heart, and the chloroformist watches the pulse for signs of heart failure, deaths will occur. It is high time this reproach to our profession and opprobrium of modern surgery should be put an end to; and if surgeons will not put an end to it themselves, the administration of chloroform should be prohibited by law until the teaching with regard to chloroform syncope is altered and brought into conformity with the conclusions of the Hyderabad Commission.

[3] It is fair to Dr. Dunlop to state that he is the apologist of others, and that in some of the deaths under chloroform which he reports the respiration *is believed* to have been watched, and not the pulse. It is evident, however, that it is no good to watch the respiration in chloroform administration if disaster is deliberately courted by the adoption of a plan so fraught with danger as making the patient count.

MEDICO-PSYCHOLOGICAL ASSOCIATION.—The next examination in England for the certificate in Psychological Medicine will be held at Bethlem Hospital on Dec. 18th, at 11 o'clock in the morning. Candidates are requested to give fourteen days' notice to the honorary secretary, Dr. Fletcher Beach, Darenth Asylum, Dartford.

NORTH STAFFORDSHIRE INFIRMARY.—The report for the past twelve months states that the number of cases treated was larger than in any previous year except 1886–87. The new ward for special female cases was nearly ready. The reconstruction of the medical staff had worked well. The financial statement was satisfactory. The establishment of a special department for eye diseases had produced an interest in that specialty. The capital of the convalescent fund was now £6210, and the incurables' fund, consisting of two donations from Sir Smith Child, amounted to £951 8s. 6*d*., but the expenditure had exceeded the income.

ABSTRACT OF THE

Bowman Lecture.

BY J. W. HULKE, F.R.C.S., F.R.S.,

SURGEON TO THE MIDDLESEX HOSPITAL, AND TO THE ROYAL LONDON OPHTHALMIC HOSPITAL.

A SKETCH of Sir William Bowman's work in relation to ophthalmology was delivered by Mr. Hulke before the Ophthalmological Society of the United Kingdom on Nov. 14th, 1890. Mr. Hulke alluded to the fostering care with which Sir William Bowman had regarded the Society during its infancy, and to the support he afforded it as its first president. He mentioned the eloquent and weighty addresses delivered by previous lecturers, and dwelt upon his own long and close association with Sir William Bowman on the staff of King's College, and on that of the Royal London Ophthalmic Hospital. Whilst the lecturer fully recognised the advantages claimed by many to accrue from the restriction of practice to one branch of medicine or surgery, conceding it to be no unfair idealisation to represent the orb of the eyeball as an anatomical and clinical cosmos in itself—realising deeply the significant truth embodied in the pregnant lines:

> "Wie gross, ist ja ein kleiner Kreis,
> Wenn man des wohl zu pflegen weiss"—

he considered that Sir William Bowman enjoyed a very great advantage in having first practised general surgery on the staff of a general hospital, and that it was fortunate for him that the later limitation was a natural result of the circumstances of his practice. He thought also that Sir William Bowman owed much to the scientific training afforded by years of patient toil as demonstrator of anatomy, and in those microscopical researches which soon placed him amongst the foremost investigators of his time.

Mr. Hulke mentioned the scarcity of microscopes among medical students in 1846 and the successful efforts made by Sir William Bowman to procure suitable instruments at a small cost; to the facilities thus afforded and to Sir William Bowman's teaching and example might be attributed that love of histological research which continued to extend, like the ever-widening circle of the surface of a pool, long after the original impulse which started them had passed from view. Among the discoveries made by Sir William Bowman one of immense importance to ophthalmology was the establishment of the muscularity of the ciliary body, made concurrently with Brücke in Germany, and which laid the anatomical basis of a theory of accommodation, still held good; and the publication of his "Lectures on the Anatomy of the Parts concerned in the Surgical Operations on the Eye," and published in 1849, supplied a long-felt want in connexion with microscopic anatomy of the eye; they contained most lucid descriptions of the structure of the retina, the ciliary muscle, and the cornea, which yet repay attentive reading. The "anterior elastic lamina" of the cornea and the interstices in the corneal tissue there made known, as mentioned in the President's inaugural address, soon received the familiar names of "Bowman's membrane" and "Bowman's tubes."

In the domain of practice great improvements were originated by Sir William Bowman, in the treatment of some disorders of the efferent lacrymal apparatus, particularly with reference to slitting up the lacrymal puncta and canaliculi, first practised by him for epiphora due to displacement or closure of the puncta, and subsequently extended by him to the treatment of obstructions of the nasal duct and their consequences, published in the Transactions of the Royal Medical and Chirurgical Society, 1851, and in the Ophthalmic Hospital Reports, vol. i., 1857. It is here demonstrated that epiphora caused by displacement or closure of the puncta is curable by slitting up the puncta and canaliculi, so as to permit the tears to escape into the lacrymal sac, and also that through the slit canaliculus dilatation of the obstructed nasal duct with stout probes was readily practicable; and further, that where desired, a suitably shaped style could be introduced and worn without disfigurement. The form adopted was one bent in the

figure of an inverted L, of which the stout vertical limb lay in the sac and nasal duct, whilst the slender and shorter horizontal part occupied the canaliculus. For dividing strictures of the canaliculi he devised a cannula lancet, which is figured in the "Annales d'Oculistiques," vol. 1855–6. It is in principle a miniature uréthrotome cachée.

The operative treatment of ptosis, particularly of congenital forms, at one time greatly engaged Sir William Bowman's attention, and he devised a highly ingenious plan of looping up bundles of the orbicularis palpebrarum muscle, giving these bundles a vertical direction by connecting them with the brow through the mediation of a cicatricial band which should play the *rôle* of a minute "tendon of origin," the results in some instances which the lecturer had witnessed being very encouraging. The same method was also adapted to the correction of entropion of the lower lid. In the treatment of squint after the introduction of tenotomy the subcutaneous plan of operating devised by the late George Critchett, and elaborated in conjunction with him by Sir William Bowman, was a great improvement upon the earlier method. In connexion with this subject, Sir William Bowman devised a ready and sufficiently accurate method of appraising and recording the deviation of the squinting eye by noting the position of the pupil in relation to corresponding points in the lower lid.

Another subject in the operative treatment of which Sir William Bowman took much interest was "conical cornea." As early as 1846 he noted in one case that there was better peripheral than central vision, that sight was improved by nearly closing the eyelids, and also by the use of a "black diaphragm" with a horizontal slit; and in another case noted in the following year the slightly opaque apex of the cone had been touched with caustic and punctured twenty-five years previously. In these notes lie hidden hints which years afterwards found their evolution: (1) In the alteration of the normal circular pupil into a long narrow ellipse by means of iridodesis, an operation devised by the genius of the late George Critchett, done at opposite points in the corneal circumference, thus placing a stenopaic diaphragm immediately in front of the lens (at one time Sir William Bowman frequently did this); (2) in the removal of the pupil from a central position behind the opaque apex of the cone, towards a peripherally less deformed part of the cornea by a single iridodesis; (3) in the methods for lessening the prominence of the cone by substituting a flatter and more resistant scar; (4) and in staining the latter with dark pigment for the better extinction of centrally incident light rays.

A paper on the Operative Treatment of Conical Cornea was published by Sir William Bowman in the Ophthalmic Hospital Reports, vol. ii., 1859. The removal of a minute apical portion of the cornea was at one time effected by him with a trephine. In the surgical treatment of cataract how many and great are the changes in procedure which the past fifty years have witnessed. In the early years of Sir William Bowman's active service at the Royal London Ophthalmic Hospital discission was much more widely employed than now, not only for soft forms, but in harder varieties also. Mr. Hulke referred to notes made in 1849 of three cases in which Sir William Bowman practised it, the ages of the patients being sixty, sixty-four, and sixty-five years. In one the use of the needle was required seven times, "excellent sight" being finally attained. A fine needle was passed through the cornea, and a small portion only of the lens was broken up at one setting, so as to avoid great and rapid swelling of this raising the tension of the globe.

The lecturer reviewed many of the methods employed for the removal of cataract and referred to the syringe devised by Sir William Bowman and used by him, not only for the withdrawal of the opaque lens tissue by suction, but in a few instances for removing the last vestiges of lens matter by washing out the chambers with distilled water. Gibson's linear extraction was a procedure in which Sir William Bowman felt great interest, and to the perfecting of which he gave much thought. In relation to zonular or lamellar cataract, Mr. Hulke referred to an observation made by Sir William Bowman, when Professor of Physiology in King's College, upon the eye of a kitten in which such a condition was apparent through the widely dilated pupils. He opened the eyes, removed the lenses, and pointed out to the prosectors the clear nucleus and cortex separated by an intermediate opaque belt.

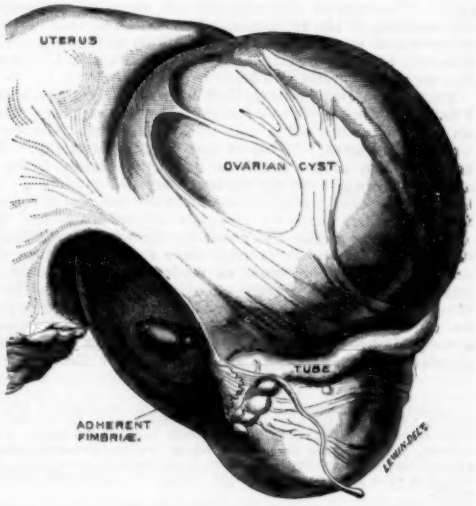
Remarks
ON
SALPINGITIS AND SOME OF ITS EFFECTS.[1]

By J. BLAND SUTTON, F.R.C.S. ENG.,
ASSISTANT SURGEON, MIDDLESEX HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—Salpingitis (inflammation of the Fallopian tube) is, in many cases, secondary to septic infection of the genital tract, especially the varieties known as septic endometritis and gonorrhœa. Other but less frequent causes are cancer of the uterus, gangrenous uterine myomata, and chronic changes originating in the mucous membrane of the cervical canal. The changes induced in the tissues of the tubes by gonorrhœa and septic endometritis are nearly identical. We may study these changes in four stages. 1. The acute stage, ending with closure of the abdominal ostia of the tubes. 2. The modes by which the tubes are closed. 3. Pyo-salpinx and its effects. 4. Hydro-salpinx.

1st stage.—When inflammation extends from the vagina into the uterus, and passes into the tubes, the tubal tissues become soft, succulent, swollen, and friable. The fimbriæ are also swollen and succulent. When the tube is slit up, the mucous membrane will be found covered with glutinous pus. If the tube be gently squeezed before it is opened, a few drops of pus will exude from the ostium. Opportunities

FIG. 1.



Perimetritic closure of the abdominal ostium of the Fallopian tube.

of examining tubes in this early stage have only occurred to me twice. Once in a young prostitute with gonorrhœa and sudden acute peritonitis beginning in the pelvis. The abdomen was opened and the tubes exposed, when pus was seen dropping from their unclosed ends into the peritoneum. The second case was more severe. The mucous membrane rapidly became gangrenous. The case was that of a woman, forty-three years of age, with a sloughing uterine fibroid. The slough was removed, but the septic mucous membrane necrosed. The necrosis extended to the mucous membrane of the tubes, and the dead tissue was found projecting into the peritoneum from the unclosed ostia of the tubes, and had set up rapidly fatal peritonitis. This case is fully described and the parts figured in the Transactions of the Obstetrical Society of London, 1890. The specimen is very instructive, for it suggests that many cases of so-called puerperal fever are

[1] The introduction to a discussion on Inflammation of the Fallopian Tubes at the Pathological Society of Manchester, Nov. 12th, 1890.

really examples of septic peritonitis, due to direct infection by pus and inflammatory discharges conveyed into the peritoneal cavity by the Fallopian tubes. This is a far simpler and more rational explanation than the quasi-learned theories which encumber text-books of Midwifery. Although these are the only two cases in which I have been able to demonstrate completely to my own satisfaction direct infection of the peritoneum in this way, examples have been placed on record by other observers.

2nd stage.—This commences with closure of the abdominal ostium, a process of great importance and one that requires careful consideration. Doran[2] has clearly shown that the ostium may be occluded by perimetritis or salpingitis. Perimetritis is a term used by obstetricians to indicate inflammation of the pelvic peritoneum. It may be secondary to salpingitis, oöphoritis, endometritis, uterine cancer, or a solid tumour or cyst of the pelvis. One of its most constant effects is the formation of adhesions due to organisation of inflammatory products in the neighbourhood of the abdominal ostium of the tube. The method by which the tube is closed in perimetritis is very simple. Inflammatory matters effused among and in the tissues of the fimbriæ cause them to swell, adhere together, and often to the ovary. The effused material organises and binds the agglutinated fimbriæ to adjacent structures, such as the ovary, broad ligament, pelvic peritoneum, uterus or rectum, and mechanically seals the ostium. The truest examples of perimetritic closure of the ostium are those which occur in connexion with perimetritis associated with ovarian cysts, especially dermoids.

Salpingitic closure of the ostium is a slow but interesting process. It takes place in the following manner. The Fallopian fimbriæ may be regarded as luxuriant protrusions of the mucous membrane beyond the ostium. When inflamed they enlarge greatly. As the salpingitis extends into the muscular coat of the tube, it becomes lengthened, and gradually bulges over the fimbriæ, until the ostium presents a rounded orifice, instead of its usual fringed appearance. Eventually these rounded margins contract, narrow the orifice, and cohere, giving it a smooth, rounded end. (Fig. 2.) On slitting up such a tube the fimbriæ will occasionally be found neatly folded up within the tube. (Fig. 3.)

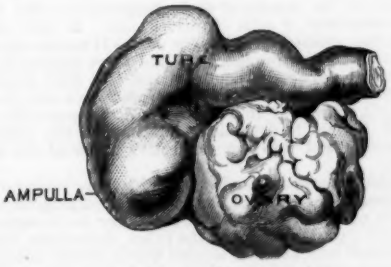
The fimbriæ are not always so neatly retracted as in Fig. 3. A few of them may be nipped by the contracting ostium, and be left projecting beyond, causing it to mimic a sea anemone. (Fig. 4.) These tubes were removed from the same patient.

After closure of the ostium, pus or mucus will accumulate within the tube, for the inflamed mucous membrane occludes the uterine orifice, and the intervening section will distend into a legume-shaped cyst, called hydro-salpinx or pyo-salpinx according to the nature of the retained fluid. Doran has pointed out, and my own observations are in complete harmony with his, that perimetritis when secondary to salpingitis will assist the latter process in occluding the ostium. In many specimens of salpingitic occlusion of the tube a small pedunculated cyst is often present. Whether this is the so-called hydatid of Morgagni or a cyst arising in a Kobelt's tube I am unable to decide.

Coincidently with occlusion of the ostium other changes are taking place. As the tube enlarges when inflamed, it spreads out the two layers of the meso-salpinx, and often burrows between them towards the ovary. As the tube thickens it also lengthens; but, being held by the tubo-ovarian fimbria and the meso-salpinx, it will often become markedly tortuous. The majority of salpingitic tubes burrow between the layers of the meso-salpinx until the ovary and tube are in contact. This process is called "obliteration of the meso-salpinx." It is occasionally prevented by the connective tissue between the tube becoming infiltrated with inflammatory products. In some cases the tube and ovary are drawn together by adhesions, and on dividing these the tube and ovary are easily separable. In such examples the meso-salpinx is merely crumpled, not obliterated. These processes have an important relation to the formation of tubo-ovarian abscesses. Salpingitic occlusion of the ostium is a slow process, and this accounts for the frequent existence of perimetritis as a complication.

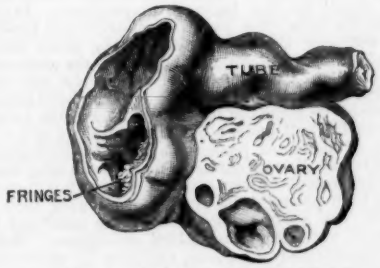
Before proceeding to discuss the gross changes which occur subsequently to the closure of the abdominal ostium, it will be convenient to consider the minuter changes which characterise infective salpingitis. The most instructive specimens are obtained from patients in whom the salpingitis is secondary to gonorrhœa, and who have exhibited evidence of tubal disease for several months. On dividing the ampulla of such a tube, it will be found greatly thickened in all its coats—serous, muscular, and mucous,—especially the last, which will often present a closely plicate arrangement resembling the arbor vitæ of the cerebellum. When slightly magnified, the so-called plicæ of the tube are seen

FIG. 2.



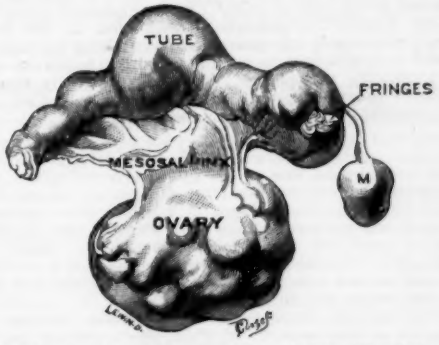
An ostium closed by salpingitis

FIG. 3.



The same tube opened to show the fringes.

FIG. 4.



Salpingitic closure of the ostium. A few fimbriæ still project from the end of the tube.

to be swollen, and almost fill up the lumen of the tube, whilst the meso-salpinx is occupied by inflammatory exudation, in which its vessels seem to be firmly embedded. It is upon such tubes as these that the following remarks relative to cells and micro-organisms are mainly based.

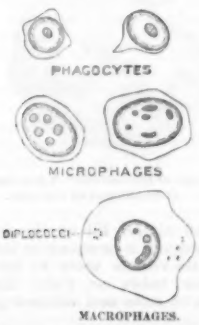
Without assuming that it is proved that pus is always due to micro-organisms, there seems little room for doubt that gonorrhœa and septic endometritis are due to the presence of such bodies, and these two affections are the most

[2] On Closure of the Ostium in Inflammation and allied Diseases of the Fallopian Tube; Transactions of the Obstet. Society, 1890.

frequent cause of salpingitis. When a healthy Fallopian tube is examined in transverse section, by means of a microscope, we distinguish easily the serous and muscular coats of the tube, and, standing upon these, the so-called plicæ formed by the mucous coat. These plicæ consist of a delicate framework of connective tissue, fringed with columnar ciliated epithelium on the free surface. Delicate strands of unstriated muscle cells may be distinguished near the base of the epithelium, and in the middle of the fold are many capillaries. As a rule, a few leucocytes may be seen scattered among the meshes of the connective tissue. When sections are prepared from tubes which have been for some months the seat of salpingitis, the appearances are very different. The plicæ are swollen to twice or thrice the usual size, and all the details of their structure obscured by an innumerable host of cells of various sizes. In many places the limiting epithelium is lost, in others it can be detected disturbed and disarranged, here and there seemingly held in position by some glutinous material. In mild cases this peculiar cell infiltration is limited, and does not involve the whole plica, but in very diseased specimens the cells are not limited to the plicæ, but involve the muscular coat, and extend into the connective tissue of the meso-salpinx.

In order to more thoroughly investigate the nature of this cell infiltration I selected some cases of salpingitis which had been under my care and which I knew to be secondary to gonorrhœa. On removing the tubes, pieces were cut out and dropped into absolute alcohol within fifteen minutes of their abstraction by operation, and before they had lost their tissue life. After careful hardening, sections were stained in logwood, alum carmine, methyl violet, and the like. The appearances now to be described came out in clearest detail in the logwood preparations. In some specimens the cells were packed so closely as to produce a mosaic, but near the free borders of the plicæ the best opportunities occurred for distinguishing the contours of individual cells. The cells were of various size and shape; in most the nucleus was so large that on superficial examination it would be mistaken for the cell itself. On carefully focusing such a cell under a moderate power ($\frac{1}{4}$ in.), a delicate ring of unstained protoplasm could be distinguished. Here and there cells with moderate nuclei and a large amount of unstained protoplasm were seen. These were not numerous. Under a high power ($\frac{1}{12}$ in. lens) the following facts were noted:—1. The greater proportion of the cells had large nuclei and a small rim of unstained protoplasm. Many of the nuclei contained three, four, and even six nucleoli, and sometimes an aster. 2. Others had a large elliptical nucleus, and in their general features resembled the epithelioid cells so commonly seen in tubercle. The protoplasm of these cells contained granular bodies arranged in pairs and collected in "groups of pairs," like the diplococci which have been described in gonorrhœal discharges. 3. The largest cells were nearly transparent, scarcely taking the stain, and with a circular nucleus small in proportion to the size of the surrounding protoplasm. These cells in nearly every instance contained groups of diplococci-like bodies. The characters of these cells are shown in Fig. 5.

FIG. 5.



Various forms of phagocytes seen in the inflamed tissues of a Fallopian tube affected with gonorrhœal salpingitis.

(To be concluded.)

ABSTRACT OF

The Morison Lectures

ON

THE NEUROSES OF DEVELOPMENT.

Delivered at the Royal College of Physicians, Edinburgh,

BY T. S. CLOUSTON, M.D., F.R.C.P.E.,

MEDICAL SUPERINTENDENT OF THE ROYAL EDINBURGH ASYLUM, MORNINGSIDE.

LECTURE II.

THE lecturer began by drawing attention to some of the morphological signs of a bad neurotic heredity that are liable to appear during development, such as changes in the countenance and expression; thus a beautiful child may become an unprepossessing youth, the development not having gone on the lines which go for mature beauty. Some features have been distorted, some retarded, some overgrown. It is in families with a hereditary neurotic taint that we find marked ugliness of various forms. And he believed the real origin of the bodily defects is a hereditary nervous one. The highest nervous function of mind also suffers deformity during development as the body suffers deformity, and all these defects show themselves during early development—they are trophic developmental neuroses. Taking mere stuntedness of growth, he held that it occurs most in neurotic families; it seems to show a certain failure of the trophic energy of the brain—a failure to complete the organism on the ancestral type. Such deficiency of growth occurs amongst the majority of idiots and congenital imbeciles, some of whom never get beyond the boy and girl size; they stop growing after five years of age. In such cases various peculiarities in expression, movements, attitudes, and modes of progression are almost universal; but there are a few exceptions to this rule where there is an irregular unrelational development. For example, we see beautiful faces with no mind, expressive eyes with no emotion to express, graceful movements and well formed, attractive bodies in imbeciles. Such want of conformity between the mental and the motor energy and its expression in countenance is far more apt to occur in childhood and disappear in adolescence. The pretty idiot child of six becomes the unattractive maiden of sixteen. Many children grow well up to eight or ten, and then cease to grow proportionately,—the head continues to grow while the body and limbs cease, or the body grows while the hands remain small. Many lads and girls do not increase normally from fourteen to seventeen. Up to five years of age imbecile and intelligent children are on the average of the ordinary weight, afterwards the former become rapidly less in weight; this is owing to a bad heredity, commonly a bad neurotic one. We all know that unattractive faces have covered up attractive and brilliant minds, but this does not in the least degree disprove the general law here laid down. Certain pathological craniologists, especially Benedekt, have devoted much labour to the form of the head, &c., as related to neuroses and criminality. He asserts that he is able to tell that a certain form of head is that of an epileptic, another that of a criminal or a murderer, or one who ought to have been a murderer. These pathological conditions, if they exist, must arise during early growth from one to five years of age, when the convolutions of the brain are chiefly developed. But while these facts are not yet proved and accepted, an acute observer like Benedekt cannot be entirely wrong. Much has been said of late about "degeneracy" and degeneration of tissues and organs. The words are used to denote imperfectly developed tissues and organs, and the tendency to disease seen in the descendants of drunkards &c., as well as applied to organs which have become abnormal. In the former or developmental sense they may mostly be put down to trophic neurosis of a hereditary character, and they unquestionably first appear during development. For every idiot or insane person we no doubt have ten human beings who are so much below a minimum standard of healthy mental development that they must be reckoned as de-

generate; they live at a lower level than average humanity; they need help always; they cannot or will not help themselves; they are easily drifted over the border between the criminal and non-criminal; they are responsible to the law and have the liberty of men, but have the self-control of children; yet liberty in a complete sense is contraindicated for them by the tyranny of their organisms. We find cases of nervous disease in their family history, and all sorts of departures from the normal. If we trace their mental histories from babyhood, we should find that their marked characteristics were not very apparent until about the age of adolescence.

The lecturer did not propose to dwell on any of the teratological defects which arise in the intra-uterine stage of life, except one very interesting and important morphological accompaniment of many of the developmental neuroses—namely, the change in the normal shape of the hard palate. The importance of this change consists in the relationship which seems to exist between the palate and the kind and quality of the brain. A typical palate shows somewhat regular curves, the dome is not very high, and forms part of a circle whose radius is much larger than the width of the mouth. Long ago it was noticed that in idiots the palate was often not regularly arched, but was V-shaped or saddle-shaped, and extended upwards into the mouth abnormally high. In such cases also the line of the teeth tended to be V-shaped instead of curved. Dr. Langdon Down held it was characteristic of congenital idiocy, but there were many exceptions to this. Claye Shaw concluded that there is no necessary connexion between the shape of the palate and the degree of mental development, but his measurements are incomplete, and his conclusions are only partially true. Another view was that the shape of the alveolar arch is indicative of the various temperaments, but the definition of temperament has been tried by various authorities, and they have pretty well failed to attach a definite type to each. The lecturer then proceeded to give an account of observations he had made on the shape of the palate. He divided palates into three varieties: the normal, the neurotic, and the deformed. The first has a low, regular, and wide dome; the second has a much higher, round, and narrow arch, with the alveolar margins tending to run more parallel; the third is very high and narrow, and either V-shaped or saddle-shaped. In this he included all marked asymmetries, central bulgings, and all great depressions where intermaxillary bones join. He first ascertained how the palates of the general population stood with regard to this classification. Taking for these the servants of the institution, and casts of palates obtained from Mr. Bowman Macleod the dentist, in all 600, he found 40½ per cent. were normal or typical, 40½ per cent. neurotic, and 19 per cent deformed. Next, he examined the inmates of the Larbert Institution for Idiots, and added to these the cases of idiocy and imbecility in the Royal Asylum, making in all 169 cases. In these the results were typical palates, 11½ per cent., neurotic 28 per cent., and deformed 61 per cent., and the average degree of abnormality was far greater in these palates than in the deformed palates of the general population. He then drew attention to the relations of the palate to the base of the skull in man, and the relation of the latter to the brain developmentally, and said there could be no doubt as to the existence of a relation between the form of the palate and the development of the brain. In acquired insanity there were 23 per cent. typical palates, 44 per cent. neurotic, and 33 per cent. deformed. As regards classes of insanity, he found in 171 cases of adolescent insanity there were only 12 per cent. of typical palates, 33 per cent. neurotic, and 55 per cent. deformed. He also examined the prisoners in the Edinburgh prison, many of whom were habitual criminals. A large proportion of these were of the degenerate classes, mentally and bodily, and fully one-half were in face, stature, and appearance far below any minimum standard of healthy human development. On examination only 22 per cent. had typical palates, 43 per cent were neurotic, and 35 per cent. were deformed. The criminals and the lunatics stand almost on a parallel, which seems to confirm the contentions of some that criminality is a disease. It does not confirm the view that the habitual criminal is a reversion to the savage type, for savages have good palates, so far as he had been able to examine them. Even infants in the criminal classes he found had high palates, which seemed to foreshadow undue liability to degeneracy, or insanity, or criminality, this being the hard fate and unyielding tyranny of their heredity. He next drew attention to the relations of the palate in man to the base of the skull, this relation being entirely different from what occurs in the lower animals, in whom it has no such relation. The theory that a high palate is a reversion to a lower animal type is not confirmed, as he did not find it in animals or any of the lower races. Deformity of the palate occurred during very early brain growth—probably, as a rule, in utero,—and must be regarded as one of the morphological indications of a tendency to developmental neurotic diseases. In the second class of palates they were apt to go along with the nervous temperament, and often go with high mental qualities, and super-sensitiveness.

IMPRESSIONS OF THE RESULTS OF DR. KOCH'S TREATMENT OF TUBERCULOSIS.[1]

BY FREDERIC S. EVE, F.R.C.S. &c.,
ASSISTANT SURGEON TO THE LONDON HOSPITAL.

THE symptoms following the injection of Dr. Koch's fini for the cure of tuberculosis have now been so often described that it is unnecessary to allude to them. I will endeavour in this communication, as far as my own observations, and the limited time during which experiments have been made, permit, to answer a question which everyone is repeating—viz., "What positive results have yet been attained by Koch's treatment?" My remarks will necessarily be confined exclusively to cases of external or local tuberculosis, of which I took notes at the bedside.

TUBERCULAR DISEASE OF JOINTS AND BONES.

The following case of early disease of hip-joint in Professor von Bergmann's clinic appeared to me to be definitely cured by the injections. The child had been kept in bed, but no splint had been used.

Willy Z——, aged three years. On admission the left thigh was slightly abducted, flexed, and quite fixed. The first injection was given on Nov. 6th, and was followed by five others on alternate days. On each occasion 0·001 gr. was used. Marked reaction followed the first four injections; the fifth, on Nov. 14th, was followed by a rise of 1·4° C. When I saw him first on Nov. 20th he was sitting up in bed. There was perfectly free mobility without pain of the left hip-joint. Rotation was absolutely unimpeded; there was complete flexion, and a scarcely perceptible lordosis was obtainable on full extension. On Nov. 22nd the same condition was maintained.

TYPICAL EXAMPLE OF SYNOVIAL DISEASE OF RIGHT KNEE, WITH SLIGHT LUNG AFFECTION.

Rudolf W——, aged twenty-three. The patient was admitted on Nov. 1st with extreme pulpy swelling of the synovial membrane of the right knee, tuberculous disease of one foot, and enlargement of glands. He had been under ordinary surgical treatment for one year, without improvement. The first injection of 0·01 gr. was made on Nov. 4th, and repeated on the 10th, 12th, and 14th inst., the reactions varying from 39·8° to 40·6° C. (See temperature chart.) Each injection was followed by a marked swelling and heat of the joint. On Nov. 20th the patient was lying in bed without any splint or controlling apparatus. The knee was still considerably swollen, but there was no heat or tenderness. A cold abscess existed in the upper part of the synovial membrane. On Nov. 22nd, the patient was up and moving about freely on crutches, with a straight limb. The swelling had very considerably subsided in the interval, and presented the general appearances of a chronically diseased joint which had been under treatment for some weeks by the ordinary methods of rest and pressure. Although the treatment had only lasted for sixteen days and no splint had been used, the improvement (judging from the description of the condition of the joint on admission given me by the assistant) was little short of marvellous.

In the clinic of Dr. Levy I also saw a child, aged three

[1] Extract from an address given in the out-patient room of the London Hospital on Nov. 20th, 1890.

years, who had been under treatment by injections for a fistula on the dorsum of one foot. This communicated with a tuberculosis of the metatarsal bones. At first the area around the fistula became extremely swollen, with high fever, after each injection; but the last injections were followed by neither local nor general reaction. When I saw the child the fistula was healed, the skin over the dorsum of the foot freely movable, not in the least degree tender, and without perceptible swelling. The patient had been nearly two months under treatment. Dr. Levy had also discharged as cured two children with tuberculosis of the knee-joint and a man with tuberculosis of the left carpus; but these patients I did not have the opportunity of examining.

TUBERCULOUS GLAND DISEASE.

In the same hospital I saw the following case: S—— (female), aged twenty-five. She had suffered from gland disease since the age of fourteen. Two operations had been performed, and the scars were still visible. No pulmonary tuberculosis. The glands are situated behind the angle of the jaw, and in the submaxillary region on the right side. An assistant and the patient herself assured me that before the commencement of the treatment a gland behind the angle of the jaw and another in the submaxillary triangle were respectively the size of hen's eggs. The skin was red and adherent, and the swelling was painful. The first injection was given on Oct. 11th, and the second on the 13th inst. After the first injection the temperature rose to 41° C., and there was considerable local swelling, the outlines of the glands being indistinct. I saw her on Nov. 19th. The largest glands were the size of cob-nuts, movable, and the skin was of normal colour and freely mobile. She was again injected for a fourth time on the 20th inst., and the temperature rose to 40·9° C., but the next morning there was no perceptible local reaction.

Another case (Anna H——, aged twenty-one) in von Bergmann's wards also showed a very decided improvement after injections of ·01 gr. on alternate days, extending from Nov. 6th to the 14th. The disease had existed for two years.

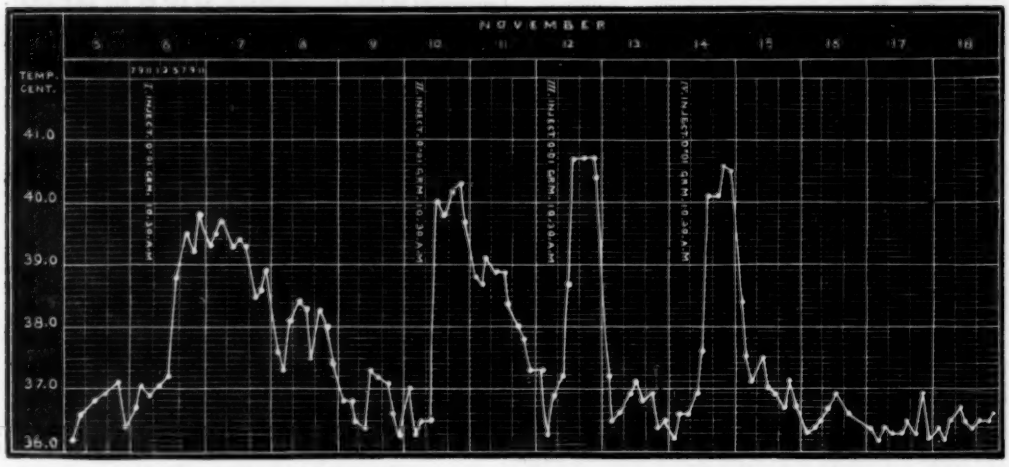
In both these cases the disease was probably too advanced for a complete cure to take place, but the affection had apparently been entirely arrested, and the swelling much reduced. It seems improbable that subsequent absorption of caseous glands would be complete, and in large tumours a surgical procedure will still be necessary for the removal of the deformity. An infant with recent gland disease had been for a short time under treatment by Dr. Levy, but I was unable to find a similar case which had been subjected to the cure for a sufficient time.

UBERCULOSIS OF THE SKIN AND MUCOUS MEMBRANE.

This variety of tuberculosis will doubtless be treated at length by the well-known dermatologists who have visited Berlin. I will only add my testimony to the marvellous results obtained in the now almost classical cases of Anna T—— and Frl. K——, which were among the very first cases injected by Koch himself. Both were cases of extensive struma-lupus of the left upper extremity, the former associated with extensive ulcerations, which are now completely and soundly healed. In the first case treatment commenced on Oct. 8th, and the second on Oct. 15th.

In two of von Bergmann's cases (K——, male, aged twenty-four, and W——, female, aged forty-five) a cure appeared to be complete, or nearly so. Both were affected with extensive ulcerating lupus of the nose, cheek, and upper lip, and in both the injections were commenced on Nov. 6th. In the first case six injections were given, the last on Nov. 15th; in the second only one injection. On Nov. 22nd the affected parts in K——'s case were covered with thin scales beneath which the skin was smooth, red, and tender, but there was no trace of nodules or ulcerations. In W——'s case the same condition existed, but a few nodules still remained over the right eyelid.

A young child with non-ulcerating lupus of the cheeks and upper lip also showed a very marked improvement after one injection of ·001 gr., eight days before I saw it. The fever lasted for two or three days. The skin over a considerable area of the cheeks was soundly healed, smooth, and becoming pale; the remainder of the patch was covered with thin desquamating scales. Many other examples of great improvement might be cited.



In some cases in which, after the first injections, all the appearances of cure have taken place, the disease may, unfortunately, return with great rapidity. A good instance of this is in Dr. R. Köhler's wards in the Charité. Max T——, aged twenty-eight, who had been under treatment since Nov. 22nd, 1889, with lupus of the nose, upper lip, cheeks, and under-surface of the chin. The disease had existed for six years, and had been cauterised five times. An injection of ·01 gr. of the fluid was made on Oct. 12th, and was followed by a rise of temperature to 39·6° C., with severe local reaction. On Oct. 24th the lip was completely healed, the nose and the right cheek covered with small white scales. The improvement was not maintained, and rapid return of the disease took place. Further injections were made on Nov. 7th, 10th, 12th, and 17th, all giving reactions varying from 39° to 40° C. Stronger injections of ·014 and ·015 gr. respectively on the 19th and 20th inst. were not followed by reaction. I saw the patient on Nov. 22nd, when the end of the nose was still covered with a thick crust of exudation.

It may with truth be urged that very few cases can be cited in which the cure is complete, and even in these recurrence may yet take place. In reality it is too early to draw a definite conclusion, and the minds of most observers may be described as in a condition of favourable expectancy. That the fluid has a wonderful effect on tubercular tissue is shown by its selective action on that alone; for individuals affected with syphilitic ulceration, cancer, and

rodent ulcer have been entirely unaffected either generally or locally by injections. It appears to excite a curative inflammation in the part analogous to the efforts observable around any diseased focus to arrest further extension; sometimes, but apparently not in all cases, the inflammation leads to necrosis of the morbid tissue. Time and further experience have yet to show us how far and in what cases the remedy may be trusted to effect a complete cure, and in what it must be considered only an aid to surgical procedures. These, as von Bergmann has suggested, will at any rate be of a much simpler and less extensive nature than formerly.

It would be ungracious to conclude without expressing my gratitude to our distinguished colleagues in Berlin for the generous manner they have thrown open their wards to all-comers.

In superficial tuberculoses the necrosed fragments are thrown off as a dry scab. In tuberculosis of deep structure the necrotic tissue would probably, unless too extensive, be absorbed and shrink in the same manner as tissue affected with coagulation necrosis.

TREATMENT OF LUPUS VULGARIS BY KOCH'S METHOD.

BY H. RADCLIFFE CROCKER, M.D., F.R.C.P.,

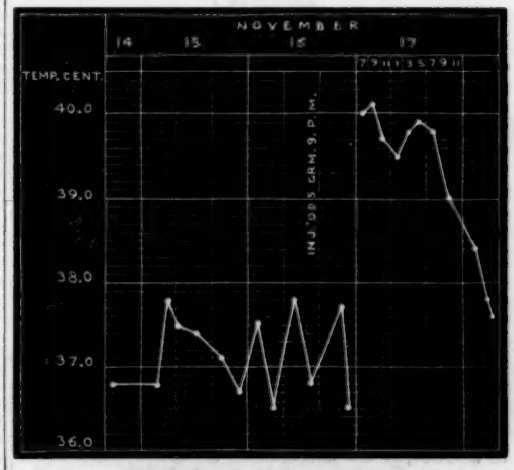
PHYSICIAN TO THE SKIN DEPARTMENT, UNIVERSITY COLLEGE HOSPITAL; PHYSICIAN TO THE EAST LONDON HOSPITAL FOR CHILDREN.

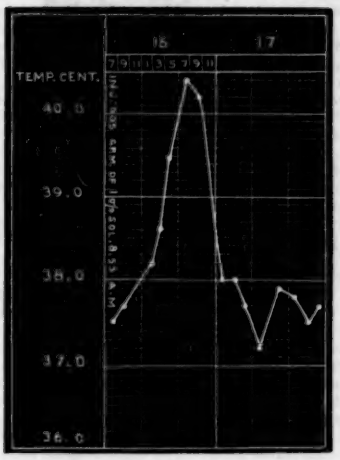
(Concluded from p. 1094.)

IN my communication of last week from Berlin, owing to my not having seen a proof, there is an error which requires correction. The first injection, as there stated, is for adults one cubic centimetre of a 1 per cent. solution, which should be expressed as "·01 of a cubic centimetre or a centigramme of the original fluid," instead of ·001, as it appeared last week. The dose ·001 or a milligramme is the first dose for young children, for adults, also, when the tuberculosis is of great extent, and probably for lupus in the larynx, where much swelling would be dangerous. I say probably, because, as far as I could hear, while laryngeal phthisis had been treated by Koch's method no case of lupus of the larynx had come under observation; but Koch himself told me that he did not think there would be the same proportion of swelling in the throat as there is on the skin. Much has been made of a case of Levy's, in which the febrile reaction was so severe that the patient had a temperature of 105·8° for thirty-six hours, and was unconscious for twenty-four hours. In justice, however, it should be stated that this was almost the first case treated, and before it was known that human beings are more sensitive to the fluid than guinea-pigs, and a decigramme was administered instead of the centigramme, now known to be the right first dose. The woman with the injection rash described last week was a case of enlarged glands, not phthisis. The rash was very little altered when I last saw her, but it had been kept up by repeated injections. As a rule, the eruption lasts only from three to five days.

I was allowed to copy the accompanying diagrams of the febrile reaction observed after injection. They are both from cases of local tuberculosis, one of bone the other of skin. The first represents what is considered the typical reaction. The second is a slight, not unfrequent, departure from it, presenting a slight fall, followed by a secondary rise as high as the first. In an exceptional case the temperature fell to normal, according to rule, but very shortly rose again to the original highest point. Another infrequent variation is that the temperature stops up with but little variation for twelve hours or more before the fall sets in. The temperature on the chart is, of course, measured by the centigrade scale, not that of Réaumur, as stated in non-medical papers, and, perhaps, I may be excused if I remind those who are not familiar with the centigrade scale that the degrees may be readily converted into the Fahrenheit scale by multiplying by nine, dividing by five, and adding thirty-two degrees to the product, so that the highest temperatures on these charts are 104·2° F. and 104·7° F. respectively.

Two cases in Levy's clinic especially attracted my attention. One was a child who had suffered from a sinus on the dorsum of the foot, which led down to diseased bone. This sinus healed up completely after injection of Koch's fluid without any operation. The other was a case of very extensive lupus in a strumous person, extending over the neck and all down one arm, with much lupus infiltration and numerous foci of suppuration. These foci entirely healed up under the injections, large areas were completely cicatrised, and there was only slight infiltration left in





various parts, and finally no febrile reaction responded to the injections. This case had been treated since September. In short, the evidence of the powerful influence of the fluid on all forms of local tuberculosis is conclusive, and we have much ground for hope in early phthisis also.

Harley-street, W.

A SMALL SURGICAL HOME will be opened in the new year at Shanklin for the operative treatment of diseases of children. It is the gift of, and will be entirely supported by, Madame Scaramanga, a lady belonging to the Greek community, who resides at Shanklin a part of the year. The Home will be under the management of Dr. Dabbs.

CHESTERFIELD AND NORTH DERBYSHIRE INFIRMARY.—At a recent meeting of the governors and subscribers a resolution was adopted to enlarge the present building and provide twenty-two additional beds, with improved administrative offices and other necessary accommodation, at an estimated cost (including furnishing) of £5000.

THE

PREVERTEBRAL HÆMOLYMPH GLANDS.

By W. F. ROBERTSON,

STUDENT OF MEDICINE IN THE UNIVERSITY, AND ASSISTANT TO DR. RUSSELL IN THE PATHOLOGICAL DEPARTMENT OF THE ROYAL INFIRMARY, EDINBURGH.

(From the Pathological Laboratory of the Royal Infirmary, Edinburgh.)

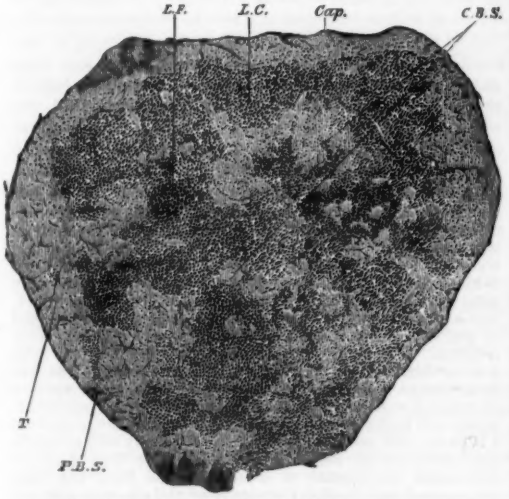
IN this paper is given an account of a set of blood-glands occurring in the body of some at least of the larger mammals, which have either not hitherto been described or are not generally recognised. They cannot fail, however, to have been often seen in the lower animals; indeed, as a matter of fact, when they were recently brought under the notice of Professor Macfadyean, of the Royal Veterinary College, Edinburgh, he was quite familiar with their naked-eye appearance, though not with their histology. That their structure has apparently not yet been described is probably owing to the circumstance that they have always been regarded as being either small congested lymphatic glands or little blood-clots. Whilst they are very small in size, they occur in such numbers in the animals in which they have been found, and their microscopic structure presents features of such extreme interest, that one feels warranted in assigning to them a position of decided importance. They have been mainly studied in the sheep and bullock, in both of which they are readily found when a dissection is made immediately after death. In the human subject, however, this is not the case, owing, it may be assumed, to the unfavourable conditions under which examinations are necessarily made. It is sufficient, in the meantime, only to mention this point, as it must be referred to again in describing the anatomy and histology of the organs in the human subject. For the suggestion of the name "hæmolymph glands," which has been given to them, I have to thank Dr. Russell.

Macroscopic anatomy.—Hæmolymph glands as seen in the newly killed healthy sheep are small blood-red bodies about the size of a white mustard seed. In shape they are rounded, oval, or lenticular. Their characteristic colour is due to the blood which fills the large sinuses within them, and appears to vary according to the degree of its oxygenation. Frequently side by side may be seen a hæmolymph gland of the bright scarlet colour of arterial blood, and another of the deep purple hue of venous blood. Their capsule in relation to their size is tough, but on section they are extremely soft in consistence, and are readily destroyed by slight pressure. They are found in the abdomen and pelvis amongst the fat and connective tissues lying between the vertebral column and the peritoneum, and in the thorax in the posterior and middle mediastinum. They extend for some distance out in the mesenteries, but do not reach as far as the gut. They are not found in the great omentum, except at its lateral attachments, and they appear to be absent from the appendices epiploicæ. In the thorax they are much less numerous than in the abdomen, but nevertheless considerable numbers of them may be found, especially in the fat and connective tissues around the root of the lungs. A few may be found in front of the lower cervical vertebræ. If the sheep under examination is not very fat, the little red dots representing these glands may be readily distinguished shining through the peritoneum in front of the lumbar vertebræ, and for a short distance out on the mesenteries. It is, however, only by careful and close inspection that it can be seen that these small red bodies are really something more than small clots of extravasated blood in the fat, or coagulæ within small veins. If the inspection is roughly made, as, for example, with the aid of the point of the finger, the impression that they are merely blood-clots will almost certainly be confirmed. In order to avoid the capsule being ruptured, it is necessary to remove the bodies carefully, and to take along with them a considerable amount of the surrounding fat. From the results of several careful dissections of newly killed sheep, I have been led to estimate the number of hæmolymph glands occurring in that animal at from three to four hundred. In the bullock the hæmolymph glands are larger than in the sheep. They vary from the size of a white mustard seed to that of a common pea. In other respects their macroscopic anatomy corresponds to that of the sheep. From the human subject I have also succeeded in obtaining organs corresponding in structure to the hæmolymph glands of the sheep and bullock. They occur in the same situations; but I have not yet been able to find them in such numbers as in these animals, owing, possibly, as has been already indicated, to the unfavourable conditions under which post mortem examinations are made. The fat and connective tissues lying in front of the vertebræ are usually so much discoloured by disintegrating blood and by putrefactive changes that the effect of a marked contrast between the colour of the glands and that of the surrounding structures is lost as an aid to finding them. But even more important than this is the condition of the hæmolymph glands themselves. Their characteristic colour, as I have said, is due to the blood with which their sinuses are distended. Now, whatever be the correct explanation, it has been found to be the rule that hæmolymph glands obtained from the human subject have their sinuses more or less empty. Hence it results that, instead of being bright red bodies, as in the sheep and bullock, they have usually a greyish-pink tint, which approximates to the colour of a lymphatic gland. It is to be borne in mind that there are lymphatic glands as small as hæmolymph glands, and if they happen to be congested, as is often the case at post-mortem examinations, it is evident that it must then be practically impossible to distinguish a hæmolymph gland from them by the unaided eye. I have nevertheless been successful in obtaining several human hæmolymph glands with sinuses fairly well distended, and therefore of a deep red colour; and this fact, taken in conjunction with what has been already said as to the normal appearance of hæmolymph glands in the healthy newly killed sheep and bullock, appears to justify the assumption that in the healthy human subject during life a similar general condition of distended sinuses exists. It may be suggested that the real explanation of the difficulty in finding hæmolymph glands in the human subject is that, though highly developed and important organs in the bullock and sheep, yet in man they are not required to perform any correspondingly important function, and are therefore comparatively few in number. In answer to this contention, it is to be pointed out that in all other known important details the organs in man correspond so closely with those of the sheep and ox that it is almost impossible to believe that in this particular close correspondence should fail. The accuracy of such a view is also rendered improbable by the circumstance that in one case, on very careful examination of tissues removed from the posterior mediastinum, I was able to find hæmolymph glands in almost as large numbers as they are to be found in that position in the sheep. Of the presence of these organs in other animals I cannot speak, but from analogy one would expect them to be present in all mammals.

Histology.—It will be most convenient in describing the microscopic structure of these glands to take that of the sheep as the type, and afterwards to point out how those of man and the bullock differ from it. A hæmolymph gland may be regarded as consisting of three portions (Fig. 1): (1) A capsule immediately within which there lies (2) a large irregular sinus distended with blood, which extends, as a rule, right round the gland; and (3) a central or lymphoid portion, into which the peripheral blood sinus sends processes. The capsule is thick in relation to the size of the organ. It is formed of dense fibrous tissue, with many non-striped muscular fibres, chiefly in the deeper layers, and a few yellow elastic fibres. The fat in which the organ is embedded is immediately external to the capsule. The peripheral sinus is in its average width about one-twelfth of the diameter of the gland. It is intersected by trabeculæ of similar structure to the capsule, which freely anastomose and form a sparse network extending from the capsule to the central or lymphoid part. The meshes of this network are filled with red blood-corpuscles and other cells similar to those found in the central part, and evidently derived from it. The central lymphoid portion is broken up into irregular segments by prolongations of the peripheral blood sinus, which vary greatly in size. The largest of them are crossed by trabeculæ similar to those of the peripheral sinus. They give origin to smaller finger-like processes, which still further break up the lymphoid part. All these sinuses are lined by a delicate endothelium. The lymphoid part (Fig. 2) consists of a framework of long spindle-shaped cells, some of which are non-

striped muscular fibres. A few elastic fibres are also present. The spaces in the framework are closely packed with cells of various kinds. (Fig. 3) Many of them appear to be merely lymphoid cells similar to those forming the follicles of a lymphatic gland. They are found everywhere; but aggregations of them, varying in number from three to six in each section, occur, especially near the margin, forming small rounded masses closely resembling the splenic lymph follicles, but differing from them in having no arterial relations. Another form of cell which is almost equally abundant is one differing only slightly from the preceding. It is rather larger, its nucleus tends to be oval instead of circular, and the surrounding protoplasm is more abundant. It differs most markedly from a lymphoid cell in its staining reaction, and may thus be readily distinguished from it. In specimens stained with logwood its nucleus, instead of staining very deeply as occurs in the case of the lymphoid cell, stains very lightly, although darkly stained nucleoli are always present in it. These cells occur throughout the lymphoid portion, but special masses of them are present in the centre of the lymph-follicles. A third form of cell is one which occurs in considerable numbers and is larger than either of the preceding. It exactly resembles a uninucleated white blood-corpuscle, consisting of a large deeply staining, often reniform nucleus, with well-defined

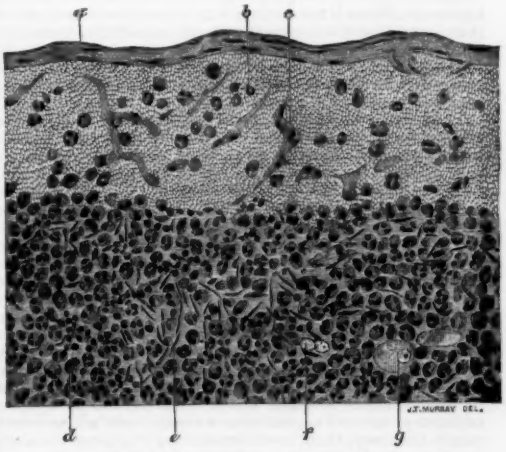
FIG. 1.



Section of hæmolymph gland of sheep (× 50). *Cap.*, Capsule. *T.*, Trabecula. *P.B.S.*, Peripheral blood sinus. *L.C.*, Lymphoid centre. *L.F.*, Lymph-follicle. *C.B.S.*, Central blood sinuses.

perinuclear protoplasm. The nucleus of this cell undergoes repeated division, so that there is ultimately formed a multinucleated cell. These multinucleated cells are most numerous near the blood sinuses. In some glands they are not very abundant, but in others they are so numerous as to constitute the most conspicuous feature in the field of the microscope. As the nuclei multiply the cell itself increases in size until those containing several nuclei have nearly three times the diameter of a lymph corpuscle. They evidently enter the blood sinuses in which they appear as multinucleated white blood-corpuscles. The number of nuclei in them varies within considerable limits. Many have seven or eight, and some have been seen with even more. In specimens stained with logwood and eosine it may be noticed that the nuclei as they increase in number gradually lose their affinity for logwood and become tinted with eosine, and from their size and contour strongly suggest the possibility that they become red blood-corpuscles. A fourth form of cell is one of large size which is probably developed from the second variety described above, as cells forming an intermediate series may readily be made out. It is from two to three times the size of a multinucleated cell, and is often somewhat triangular in shape. It has a large nucleus which stains lightly with logwood, and a small deeply staining nucleolus. In some, however, no nucleolus can be seen, and in others the nucleus has also disappeared, so that there is left only a large usually rounded protoplasmic mass which stains with eosine. A fifth form of cell is one of considerable interest, but it is not always very numerous. It is about the size of a multinucleated cell and usually oval in shape. It has a large nucleus, faintly stained with logwood (in specimens stained with logwood and eosine), and a small amount of surrounding protoplasm. A few cells are to be seen, however, in which no perinuclear protoplasm

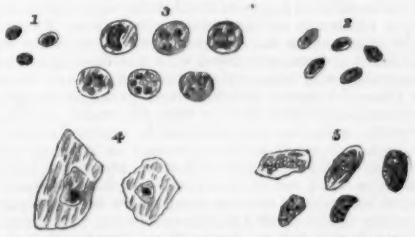
FIG. 2.



Section of hæmolymph gland of sheep (× 600). *a*, Capsule. *b*, Peripheral blood sinus. *c*, Trabecula. *d*, Group of multinucleated cells. *e*, Non-striped muscular fibre. *f*, Two cells of the fifth form described. *g*, Large protoplasmic mass with nucleus. To the right is a similar mass without a nucleus.

can be detected. In some the nucleus is seen to contain many minute nucleoli stained deeply with logwood. In others, many of these nuclei are stained with eosine instead of logwood, and in a very few it has been observed that all the nucleoli are stained with eosine. In places where the cells are not densely packed together red blood-corpuscles are to be seen lying amongst them. There are also present in considerable numbers small homogeneous cells, about one-third the diameter of a red corpuscle, which stain with eosine in logwood and eosine preparations. These are found

FIG. 3.



Drawing of different forms of cell seen in central part of hæmolymph gland of sheep. Description in text.

in the blood sinuses as well as between the cells of the central part.

Regarding the course of the blood through these glands I cannot speak positively, as injections have not been made. A large artery passing to the centre of the gland is a conspicuous feature in some specimens, and probably indicates the course taken by the blood. From what can be made out in uninjected specimens, I am inclined to think that the circulation is extremely simple. The central artery appears to divide into small vessels, which in turn divide into capillaries, most of which ramify in the lymphoid

portion, while others run in the trabeculæ, all ultimately opening into the sinuses. The peripheral sinus communicates with the exterior of the gland by openings which pass obliquely through the capsule, and which are formed, as it were, by a splitting of the laminæ of that structure. These intracapsular sinuses may be seen in many specimens extending for one-fifth or more of the circumference of the gland. Immediately outside the capsule the blood is received into a vein of the usual structure. While this may be taken as the typical structure of the hæmolymph gland of the sheep, there are to be found many which differ markedly from this description in one particular feature. Whether it is to be regarded as a pathological or a physiological condition is uncertain; but in the glands in question it is found that the fibrous tissues and non-striped muscular fibres are present in such abundance as to very markedly lessen the size of the blood sinuses, and to diminish the spaces left for the cells of the pulp, which consequently are comparatively few in number.

The hæmolymph gland of the bullock is formed on the same plan as that of the sheep, and does not differ from it in any essential details. Several of the trabeculæ which pass towards the centre of the gland from the capsule are, however, much larger than in the sheep, and the masses of cells with large pale nuclei, which occur in the centre of the lymph-follicles, are much more conspicuous, in logwood and eosine specimens coming out quite a different colour from the surrounding lymph-corpuscles. The cells in the central portion are essentially the same as in the sheep, but the number of red corpuscles lying between them is usually greater. Some of the large protoplasmic masses contain orange-coloured pigment. The large trabeculæ are in places broken up by small blood sinuses. These are also frequently present in the capsule towards its inner half. In fluid taken from a fresh hæmolymph gland of the bullock, and examined in normal saline solution tinted with an aniline dye, in addition to the cell appearances already described as occurring in the sheep, there have been noticed very large rounded, homogeneous-looking masses which stain lightly. They are probably identical with the large protoplasmic masses which have lost their nuclei. Hæmolymph glands obtained from the human subject resemble very closely those of the sheep. The only important difference that has yet been observed is that the peripheral blood sinus is interrupted at places by the lymphoid portion reaching the capsule. When the sinuses are empty or nearly so, as is usually found to be the case, it is often extremely difficult to tell whether one is looking at a small lymphatic gland or a hæmolymph gland. In some of the best specimens obtained the same forms of cell as occur in the sheep and bullock have been clearly made out. As in the case of the sheep, several glands have been seen in which the typical appearances are greatly altered by the presence of an unusually large amount of fibrous and non-striped muscular tissue.

Function.—Regarding the function of these glands very little of a definite character can at present be said. The idea that they are concerned in the formation of the red blood-corpuscles at once suggests itself, but great caution is necessary in coming to so important a conclusion. There are no doubt appearances in the glands which strongly suggest that some process connected with the development of the red corpuscles is taking place within them, and more than one plausible theory defining its steps might be advanced. For example, it may be seen that the nuclei of the multinucleated cells, as already stated, gradually lose their affinity for logwood as they increase in number, while at the same time they approach both in staining reaction and in form to small red blood-corpuscles. Nevertheless I have not yet been able to see any appearances sufficiently definite to justify one in coming to the conclusion that these eosine staining bodies within the multinucleated cells are really young red corpuscles. Again, as has also been already mentioned, it may be seen that the nucleoli of certain cells in the glands undergo an exactly similar change in their staining reaction. In logwood and eosine specimens cells may be seen with large nuclei which are lightly stained with logwood and contain many small pink bodies corresponding to nucleoli. Now exactly similar eosine-tinted bodies may be seen between the cells of the lymphoid part and also in the sinuses, but that these have actually been derived from the nucleoli of the cells in question, or that they represent any stage in the development of red blood-corpuscles, cannot yet be asserted absolutely, notwithstanding the suggestiveness of the appearances. It must therefore be admitted that the function of hæmolymph glands is in the meantime undetermined. Only one definite statement regarding them can be made, and that is that they are the source of some at least of the lymphoid cells and the uninucleated and multinucleated corpuscles which occur in the blood. That they have very important relations to the development of the blood, notwithstanding that these relations cannot yet be defined, can scarcely be doubted, and I think it is probable that when further investigation has thrown more light upon the changes that take place in their cells, it will be found that they contribute in an important manner to our at present very incomplete knowledge of the life-history of the red corpuscles.

In conclusion, I have gratefully to acknowledge the guidance and assistance Dr. Russell has given me in working out the histology of these glands and in the preparation of this paper.

AN IMPROVEMENT IN INTERNAL PHLEBOTOMY.

BY GEORGE HARLEY, M.D., F.R.S.

IN your issue of Nov. 1st is an interesting and instructive paper by Dr. Christian Simpson, entitled "A New Method of Bleeding in some forms of Pulmonary Congestion," in which he relates four cases in which he had practised it with benefit to the patients. I notice that he alludes to his new method of extracting blood directly from the inflamed lungs as being an extension of the method of performing hepatic phlebotomy which I laid before the profession in 1886, and which led to so much discussion at the time. He has, however, added thereto a suggestion which I deem of so much importance that I desire herewith to call special attention to it, in the hope that others, when practising either pulmonary or hepatic phlebotomy, will adopt it. The improvement suggested by Dr. Simpson is embodied in the following sentence: "After the withdrawal of twelve ounces of blood, the cannula was held *in situ* with the finger over the end to allow of a clot forming, and then it was slowly withdrawn altogether. A piece of plaster was applied over the puncture, but a flannel bandage could not subsequently be retained in position. The patient was immediately and markedly relieved." This suggestion of encouraging the blood to form a clot, which will act as a plug, and thus prevent subsequent hæmorrhage, I consider a most valuable one, and I venture to propose a slight modification in the mode of procedure, which will make the plugging of the wound by the coagulum, I believe, still more secure and effective. It will no doubt have occurred to some of the readers of THE LANCET that when the stream of blood from the lung has been interrupted by stopping the mouth of the cannula with the finger, the coagulum formed within it will be in a continuous mass with the one formed at the distal orifice of the instrument. So that on the withdrawal of the cannula there will exist considerable danger of the small blood-clot that has formed between the extreme end of the cannula, and the lesion made in the tissue by the point of the trocar becoming detached from its surroundings, and withdrawn along with the coagulum inside the cannula, to which it will of necessity not alone be continuous, but likewise intimately adherent. In order to reduce this risk to a minimum, as well as the equal danger of any oozing of blood taking place from the walls of the passage after the removal of the cannula which bleeding would of itself to a certain extent tend to defeat the object held in view in encouraging the formation of the blood-clot, I propose a simple modification in Dr. Simpson's mode of procedure, which will be equally applicable to cases of pulmonary and hepatic phlebotomy.

What is wanted is, of course, not only to encourage the formation of an intra-pulmonary or an intra-hepatic blood-clot, but at the same time to ensure its fixation in the wound, in order to avoid all risk, after the withdrawal of the cannula, of hæmorrhage either into the pleural cavity on the one hand, or into the abdomen on the other. My proposal is this: As the trocar has always to be thrust some distance into the tissues of the organ from which it is desired to extract blood, I think before placing the point of the finger on the mouth of the cannula, with the view of arresting the blood-flow, it should be slightly withdrawn—say, about

half an inch or more,—in order to leave an empty passage wherein a sufficiently large blood-clot may form and fill the channel. In which case the surrounding tissues of the organ will, in contracting upon the clot, hold it so firmly by their own resilience that, on the withdrawal of the cannula, it will break off from the end of the much larger mass within it, and remain as an effective plug in the wound. This is a point of greater importance in cases of pulmonary than of hepatic phlebotomy. For while the rigidity of the ribs makes it impossible for one to compress by means of a pad and binder the thoracic walls against the wound-orifice in the lung sufficiently firmly to preclude the escape of blood from it,—in the case of the liver, on account of the wound being made in the outer surface, and the abdominal parietes immediately over it being freely mobile, no difficulty whatever is experienced in bringing the abdominal walls into firm contact with the orifice of the wound in the liver by the application of a bandage and compress, and thus effectually preventing after-hæmorrhage. However, even in the case of hepatic phlebotomy I think it just as well to recommend taking the additional precaution of preventing, by the induction of the formation of an intra-hepatic blood-clot, any possibility of internal bleeding occurring. Moreover, as, if I am not much mistaken, the day is not far distant when the old-fashioned and unsatisfactory mode of extracting blood cutaneously will be totally abolished in cases of deep-seated inflammation, and internal phlebotomy of deep-seated organs will become a common practice, I should advise operators invariably to endeavour to obtain the assistance of a blood plug in warding off the danger of internal hæmorrhage after the operation of internal phlebotomy of any deep-seated organ whatever.

Harley-street, W.

SUPRA-VAGINAL (ABDOMINAL) HYSTERECTOMY WITH THE SCISSORS.

A CONTRIBUTION TO THE DISCUSSION ON THE TREATMENT OF THE UTERINE STUMP.

BY H. N. M. MILTON, M.R.C.S., &c.,
CAIRO HOSPITAL.

THE almost universal condemnation (as reported in the medical papers) of the method advocated by Mr. Treves during a recent debate on abdominal surgery lends a certain interest to the record of the following three cases, in which a similar method was pursued. During the first three months of this year three patients presented themselves at the hospital with urgent symptoms of uterine myomata. A want of faith, perhaps unjustifiable, in the sufficiency of the treatment by removal of the uterine appendages, and a suspicion entertained that in two of the cases the myoma was solitary, and of the soft œdematous variety admitted by Lawson Tait to be incurable by that operation, led me to adopt hysterectomy in preference. On considering the best method of performing this operation, it seemed evident that the same principal points required attention in amputation of the uterus as in any other amputation—viz., to prevent hæmorrhage during operation and cicatrisation, and to place the wound in the best condition for rapid healing. For the prevention of hæmorrhage two methods presented themselves: (1) Ligature of the pedicle *en masse*—i.e., of the broad ligaments and the neck of the uterus; (2) ligature of the vessels separately. The simple ligature of the pedicle is evidently unreliable, the elastic ligature is but little less so, while the serre-nœud, if a necessity, is but a necessary evil. On the other hand, the arteries of the normal uterus are most easy to find and ligature. All the ovarian arteries and veins are easily included in the ligature of the broad ligament. The uterine arteries and veins, passing up as they do along either side of the cervix uteri and giving off only the tiniest branches until they reach the level of the internal os, can be grasped, after reflexion of the peritoneum under which they lie, with ordinary artery forceps. The blood-supply of a uterus increased to many times its original size must of course be modified, but this modified blood-supply is furnished with one exception from the same branches as that of the normal uterus. I admit that I feel great diffidence in making this statement, justified as it is by only four cases, three of which form the basis of this paper, while the fourth was a woman who had died of apoplexy, and on whom a huge uterine myoma was found post mortem. In all these cases the ovarian vessels were greatly enlarged, but all retained their position in the broad ligament. The uterine vessels were increased to several times their normal calibre, but retained their original position along each side of the uterus; and—a fact of the greatest importance—their huge branches also retained their normal point of origin above the internal os. This fact is probably due to two causes: (1) The absence in the normal uterus, as already pointed out, of any considerable branches below the internal os; (2) the almost constant attachment of myomata to the body of the uterus and not to the cervix. The blood-supply to the enlarged uterus is therefore as amenable to control as that of the normal uterus, the one exception being the vessels passing along adhesions. The adhesions of a uterine tumour are, however, as compared with those of many ovarian tumours, not very vascular, and, being beyond the field of action of the serre-nœud, require to be treated by separate ligature in both cases. The practicability of ligaturing the vessels being settled, the best method of procuring the rapid healing of the stump became evident. The peritoneum of the uterus bears so close a functional relation to the integument of the thigh, and is so superior in its healing powers, as to at once suggest a similarity of treatment after amputation. The only question to decide was whether to use peritoneal and muscular flaps, or peritoneal only. By making a semilunar incision in the peritoneum, commencing laterally at the level of one os internum, and passing across the front of the uterus an inch or so above the utero-vesical fold, to the corresponding point on the other side, and by separating the included peritoneum from the uterus (which may easily be effected by the handle of the dissecting forceps) a peritoneal flap may be turned down for some two inches, carrying with it into safety the bladder. A similar posterior flap may then be turned down, the incision being on a slightly lower level than the anterior one; and by separating the peritoneum from the sides of the cervix uteri at the points of anion of the incisions all fear of injuring the ureters may be avoided. The practicability of the above methods was evidenced by the three cases in which it has been employed, all of them having been successful. In all three cases the only instruments used after the abdominal incision was completed were scissors, forceps, and needles.

CASE 1.—A negress, aged about twenty-eight. She had had three severe attacks of hæmorrhage during the last few months. The tumour was said to have existed over a year. On admission the hæmorrhage had ceased, but the patient was almost bloodless, and only rallied after careful treatment. On careful examination three days later the uterus was found to be uniformly enlarged, reaching to within an inch of the umbilicus. The sound entered five inches and a half; the neck of the uterus and os externum were normal. Two weeks later, Jan. 20th, when the patient's general condition had improved, hysterectomy was performed. A four-inch median incision was made in the abdominal wall, and the uterus found to be uniformly enlarged and free from adhesions. First, the left broad ligament was tied in two pieces with silk, outside the ovary, and then the right ligament. The incision in the abdominal parietes not being sufficiently large to allow of the passage of the uterus, it was extended up to the umbilicus. On pulling the uterus well forward the cervix could be quite easily felt and grasped. An incision was then made with the scissors in the anterior peritoneal covering of the uterus, passing from one side of the uterus at about the point where the cervix expanded into the enlarged body, across the front of the uterus, one inch and a half above the vesico-uterine fold to a corresponding point on the opposite side. The flap of peritoneum thus made was detached with the greatest ease from the uterus with the handle of the dissecting forceps, and turned down for about two inches, carrying forward with it the bladder. During this part of the operation two or three oozing points were seized with artery forceps. A similar posterior flap was turned down (not quite so easily as the anterior one, the peritoneum being thicker and more closely adherent), and the peritoneum covering the cervix laterally was also easily detached for about half an inch on either side. The

tissues on either side of the cervix, containing the uterine arteries and veins, were then seized in two places with artery forceps outside the reflected peritoneum, and snipped through. The uterus was then slowly snipped across just below the point where the cervix expanded into the enlarged body. An assistant stood by ready to pick up any spouting vessels, but his services were not required, as, with the exception of at the most four drops of blood, which oozed from the stump, the whole loss of blood, amounting perhaps to half an ounce, took place from the body of the uterus.

After the removal of the uterus the mucous membrane of the cervix tended to evert, and to obviate this a wedge-shaped fragment was snipped out of the centre of the cervix, and the two lips thus formed roughly united with a couple of catgut stitches. All vessels held in the artery forceps were then tied with medium-sized catgut, and the peritoneal flaps united with a continuous catgut suture over the stump, the line of union extending from the point of ligature of one broad ligament to that of the other. The peritoneum of the pelvis was then dry sponged, and about half an ounce of clot removed. The aspect of the peritoneum at this moment was strikingly perfect; all one saw was a dry glistening surface with a narrow line of union passing across the pelvis. The abdominal wound was then closed, the peritoneum with a continuous catgut suture, and the rest of the tissues with a continuous buttonhole wire suture. No drainage-tube was used, and a simple cotton-wool dressing applied. On the sixth day the patient was dressed and the stitches removed. On the tenth day she was up and cured. The uterus when examined contained one large soft myoma, occupying the whole cavity, and weighing, after draining, seven pounds.

CASE 2.—A negress from Bermuda, aged about thirty. The patient had suffered from very profuse uterine hæmorrhage for a year, with great uterine pains. On examination the uterus could be felt well above the pelvis and irregular in outline. Per vaginam two or three large nodules were felt on the anterior surface of the tumour, and two nodules could be felt, per rectum, on the posterior surface. The length of the uterus was four inches and a half at least. On Feb. 19th an exactly similar operation was performed as in the last case, and the result was equally successful. The patient was practically cured in six days. The uterus contained nine myomata, submucous, interstitial, and sub-peritoneal.

CASE 3.—An Egyptian, aged about thirty-two. This patient entered hospital in a condition of most extreme anæmia after repeated attacks of uterine hæmorrhage. Her condition on examination was almost identical in every respect with Case 1. On April 16th she was operated on in exactly the same manner, and her subsequent convalescence was equally rapid. She was up and cured on the twelfth day.

These three cases did not present any serious difficulty from the size or adherences of the tumour, and it is quite possible that a proportion of cases cannot be treated in this manner; but it seems to me that whenever a uterus can be sufficiently isolated to allow of a serre-nœud being tightened round its cervix, it will be equally possible to pick up the uterine vessels and to raise peritoneal flaps. My experience has been small, and perhaps exceptionally happy, but the extreme facility of the operation when performed on a comparatively small tumour is an argument for early operation; and when one considers the perfect condition in which the peritoneum is left, it may be anticipated that the operation in the hands of skilled operators will be but little more dangerous than an exploratory abdominal section, and that the question may be entertained of submitting to immediate hysterectomy every case of uterine myomata not being polypoid in which the uterus is raised well above the pelvis, whether severe hæmorrhage has taken place or not.

Kasr-el-Aini Hopital, Cairo.

CHICHESTER INFIRMARY.—This institution continues successfully to bestow its benefits and to maintain its long (sixty-four years) career of usefulness. A recent change, limiting the time for which a letter of recommendation is now available, has worked advantageously alike for the patient and the institution. The financial position is satisfactory.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

TRANSPOSITION OF VISCERA IN ONE OF TWINS.

BY W. B. HADDEN, M.D. LOND., F.R.C.P.,
ASSISTANT PHYSICIAN TO ST. THOMAS'S HOSPITAL AND TO THE HOSPITAL FOR SICK CHILDREN.

TWO years ago a young woman, aged twenty-four, came under my care as an out-patient at St. Thomas's Hospital. She was suffering from anæmia, and I found accidentally that the heart and abdominal viscera were transposed. I asked her if she was left-handed. She replied that she was not, but that her twin sister was. This girl, who happened to be then an in-patient at St. Thomas's Hospital, bore a remarkable resemblance to her sister. She told me that she was left-handed as a child, but that she had been taught to use her right hand at school, so that she was now ambi-dexterous. She preferred her left hand, however, for many household purposes, such as cutting bread. There was no transposition of viscera. These girls had a brother, one of twins, who was said to be left-handed, but I could not obtain an opportunity of examining him.

I was not aware at the time that it had been often stated that individuals with reversed viscera are left-handed, so my question as to left-handedness was prompted solely by the theoretical consideration that the cerebral hemispheres might be transposed. In an interesting article on Transposition of Viscera in Dr. Kingston Fowler's Dictionary of Practical Medicine, Mr. Bland Sutton asserts that there is no support to the supposition that left-handedness occurs in the subjects of transposed viscera. In face of this positive statement by so careful an observer as Mr. Bland Sutton, I feel some reluctance in again suggesting that left-handedness may be due to a reversion of function of the cerebral hemispheres. The use of the right hand in the vast majority of individuals is assuredly not accidental, but is probably due to the fact that the left hemisphere is, as I think Dr. Hughlings Jackson has said, "like an elder brother who takes and keeps the lead through life." It would be interesting to hear from others if left-handedness has been found in association with transposed viscera, either in the individual or in other members of the same family. I have seen occasional instances in which the use of the left hand was clearly hereditary; and I believe, though I must speak on this point with reserve, that certain mechanical defects of speech in children are apt to occur especially in left-handed subjects. In the article to which reference has been made Mr. Bland Sutton is of opinion "that when twins occur of the same sex, with a common amnion and single placenta, they are the product of a single ovum. This, of course, suggests that an individual with transposed viscera should be one of twins. Unfortunately, no facts are forthcoming whereby this view may be tested, but it is one that would repay investigation. It must be carefully borne in mind that it does not follow that because only one child was recognised at birth, therefore only one was present. Many cases of twin birth have been recorded in which the second child was flattened out, and formed merely a small lump in the membrane, or presented itself in the form of an acardiacus, and the writer has known such masses to be cast aside even by obstetric physicians [who ought to have recognised them] as mere 'adventitious lumps.'"

The cases of these twin sisters lend some support to the view put forward by Mr. Bland Sutton. Others may be able to bring forward facts in support, or it may be in contravention, of his theory and of the suggestions which I have thrown out with regard to left-handedness.

Welbeck-street, W.

A CASE OF MUMPS FOLLOWED BY MENINGITIS.

BY G. H. DOUDNEY, M.B.

THERE has been lately in this district of Eastern Lincolnshire a rather severe epidemic of mumps, chiefly remarkable for the number of adult sufferers. Several of the males

suffered also from orchitis, so much so that this complication was rather the rule than the exception. In the case of a little boy about seven years old there was very severe deep-seated abdominal pain, which I could not avoid referring to some inflammation of the pancreas; it came and went very suddenly; there was no inflamed testicle here. But in one case the brain symptoms were so severe that I think a few notes about it will be considered worth recording.

Mr. M. S——, aged thirty-five years, corn factor &c.; fair health except tendency to headaches and sluggish bowels. On Friday afternoon, Sept. 19th, he complained of a swollen neck and a feeling of slight malaise. I found the parotid gland of the left side very tender and enlarged. Ordered a mixture of citrate of potash, liquid diet, and local application of poultices. On Tuesday, the 23rd, I saw him again. He had treated the matter rather lightly, and, feeling better on Monday, he had attended a market about ten miles off, and had driven some distance in an open trap. He thought he had taken a chill, and had shivered. I found his right testicle swollen and tender, and the parotid swelling almost gone. He complained of thirst and very severe frontal headache. Temperature a little over 100°. I ordered him to rest in bed. The next day I found him restless and anxious, the headache most acute, "all over his head." He had not slept at all. Bowels not acted; urine scanty; temperature 103·5°; very thirsty. He complained of severe præcordial pain, which was, however, relieved by a mustard poultice. At 9.45 P.M. the same evening, although a purgative had acted on the bowels once, he was much worse; the eyes were injected; pupils both contracted; headache intense; a little excitable, but not delirious; temperature 104·5°; pulse 120, hard and bounding. My friend, Mr. Charles Walls of Burgh, saw him with me about half-past eleven the same evening. We ordered fifteen grains of bromide of potassium to be added to each dose of the mixture he was taking. Cold-water cloths were continuously applied to the head. The next morning he was still suffering from acute pain all over the head. He had not slept; he showed some tendency to ramble. Temperature 105°. The cold cloths seemed to increase the pain; we therefore ordered hot sponges, wrung out in hot water, to be used instead, continually, and after an hour this greatly relieved the pain. No sickness, except after a dose of castor oil; another dose was retained. Soda-water and milk at intervals. On the evening of the 25th the temperature had fallen to 103·5°. Hot sponges still continued, with hardly any interval. Still feeling of nausea, but retains the soda-and-milk. The room was kept darkened, straw laid down thickly outside the house as the slightest noise troubled him. During the night he slept a little, and at my first morning visit on the 26th I found the temperature barely 102°. Hot sponging continued all day. Bowels open. Pulse 100, intermittent 1 in 13.—27th: Temperature 100·5°; pulse 84. Still headache.—28th: Temperature subnormal (97°). From this point he made a continuous but slow recovery. The headache continued, but was always relieved after the hot sponging.—Oct. 7th: Can walk a little about the room.—20th: Out of doors; says he feels quite well.

I have recorded this case at some length, as, although brain symptoms are alluded to in connexion with mumps in some text-books, I cannot find any detailed cases. In this case there was nothing more acute than usual when the parotid gland was first inflamed, but there was most certain evidence of a chill contracted while suffering from the slight feverishness which always occurs in mumps.

Wainfleet, Lincolnshire.

SYMPATHETIC OPHTHALMIA OCCURRING FOURTEEN YEARS AFTER RECEIPT OF THE ORIGINAL INJURY.

By GEORGE F. HELM, F.R.C.S.,
OPHTHALMIC SURGEON TO THE ROYAL CORNWALL INFIRMARY.

J. Q—— came to me on Dec. 20th, 1886, complaining that the sight of his left eye was not so good as it used to be. The right eye was injured fourteen years ago by a portion of a bullet. He was marking at the time he received the injury at the rifle range where shooting was going on. This eye diverges, and is evidently the subject of traumatic cataract. The patient has never felt any pain in it, but it has always felt tender when pressed. At present it does not look at all inflamed, and he says it is in no way different from its ordinary condition. The left eye was quite well ten days ago, but since then he has noticed a fog or smoke to be always present before his eye. There is no pain in it now, nor has he ever had any pain. The eyeball is prominent, and the conjunctiva red; but it was not so yesterday. The pupil acts, but sluggishly, and is somewhat oval. There is some slight ciliary injection. He has been compelled to give up his work—that of a carpenter. Right eye: Vision is totally destroyed. Left eye: Vision $=\frac{6}{12}$; reads J. 2 at twelve inches. There is no improvement with any lens for distant vision. Tension in each eye is below the normal. The ophthalmoscope shows some keratitis punctata. I told him that his left eye was suffering from sympathetic ophthalmia, and advised that its fellow should be removed. This he declined. In April, 1887, he found his sight failing so fast that he went up to Moorfields, where his eyeball was removed the next morning, I believe from Tenon's capsule, and a glass globe inserted. $V = \frac{6}{12}$. To continue to use atropine as ordered, and to wear dark glasses. He continued on and off to use atropine for a couple of years or more, during which time his vision has declined to $\frac{6}{24}$, and to all appearance the vision will continue to get worse. He now, in June, 1890, complains of great discomfort in each eyeball, so I admitted him into the Royal Cornwall Infirmary, in order to remove the glass globe from the right eye. I found that this was no easy matter to accomplish, for the globe was sunk so deeply in the orbit that I could hardly reach and hold such a slippery glass globe. Moreover, it was so tightly and closely enveloped by very tough tissue that it was only after great difficulty that I was able to slip it out of its capsule. A few days later he expressed himself as feeling quite relieved from the uncomfortable feeling which he had complained of in each eye. His vision, however, remains now (November, 1890) at $\frac{6}{24}$. Pupil is insensible to atropine; anterior chamber is shallow and iris dotted over with deposits of lymph. The eyeball, when examined after removal, contained some osseous deposit in the choroid, as well as a piece of lead—the cause of all his subsequent trouble. The moral of this case is one which has been so often preached to unwilling ears—viz, the necessity for insisting on an early removal of the injured eye; but the uneducated are slow to listen to advice the exact *rationale* of which they cannot understand. And, moreover, this case shows that hardly any lapse of time gives security against a liability to sympathetic ophthalmia. The glass globe had probably nothing to do with keeping up the destructive process which had already begun when it was inserted, but its presence added much to his discomfort, for he has been quite free from any pain ever since I removed it.

Marazion, Cornwall.

LOCAL DEPLETION OF THE CERVIX UTERI.

By ALEXANDER DUKE, F.R.C.P.I., &c.,
EX-ASSISTANT MASTER, ROTUNDA HOSPITAL; GYNÆCOLOGIST, STEEVENS'S HOSPITAL, DUBLIN.

TAKING blood from the cervix uteri, though not so much practised as formerly, is still a valuable aid in some gynæcological cases. I now never puncture the cervix, as the same advantages can be gained by scarification—viz., merely drawing the end of a rounded sharp knife across the os and cervix, which gives rise to no pain, and has the great advantage of safety, as I have seen severe hæmorrhage follow puncture. When the part looks congested and blue, instead of the ordinary light pink, or mother of pearl, as some describe it, I make it a rule to take a little blood by scarification; and I use nothing to check bleeding, as this always ceases when enough blood has flown, as shown by the altered colour of the part. In cases of stenosis and flexion, when there is any considerable difficulty in passing the sound, I scarify the part, and when bleeding ceases I have never failed to introduce the sound or point of my dilator. I learned this proceeding from noticing how relaxed the uterus and cervical canal become after hæmorrhage from that organ. If more blood is wanted when the bleeding has ceased after scarifying, I fit a sponge into a holder large enough, when moist, to tightly fill the cylindrical speculum, and by moving it up and down, I, in the speculum, produce a vacuum, and thus cup the cervix. I have found this a useful proceeding in cases of amenorrhœa

from congestion, and hope that gynæcologists will give the plan a trial. I also found it useful during the menopause when the patient complained of intense headache, more especially of the vertex, and by drawing blood at regular intervals, and so imitating nature, I have been able to give more relief, and in a far shorter time, than by the use of drugs.

Dublin.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

A CASE OF ILEO-CÆCAL INTUSSUSCEPTION IN AN ADULT; ABDOMINAL SECTION; RECOVERY; REMARKS.

(Under the care of Dr. NORMAN DALTON and Mr. WATSON CHEYNE.)

INTUSSUSCEPTION is such a rare disease in the adult that the record of a case successfully treated by any method would be of interest, and much more so is the account of a case in which recovery followed reduction of the intussusception after abdominal section. We have in a previous number of THE LANCET[1] considered the question of treatment of this disease, and cannot do more than refer to the method employed by those in charge of this patient. From statistics collected at that time,[2] the operation of laparotomy had been performed sixty-three times. In thirty-four, when the invagination was reduced (twenty-three of which were children), five recovered; and out of eleven adults, seven recovered.[3] In the children the ages varied from six months to four years; the duration of symptoms before operation from seventeen hours to a month. Of the cases where success followed in the adult, the ages varied from twenty to fifty, and the duration of the symptoms from some hours to several months. To these we added other successful cases: one by Mr. Carver,[4] a boy aged two years and nine months, in whom abdominal section was successful seven weeks after the commencement of symptoms; and a second by Mr. Workman,[5] that of a child aged eight months and a half. Operation was performed on the failure of insufflation, combined with massage; the symptoms had existed for only twenty-four hours. Since our previous publications on this subject, few cases have been recorded, but Mr. Annandale[6] operated successfully on a child three years old for acute obstruction, the symptoms of which had commenced two days before. Attempts to afford relief before operation by opium given in small doses, the administration of enemata, and the use of rectal bougies, were unsuccessful. Still more recently, Dr. F. Kammerer[7] has operated on a child of six months for acute obstruction, and obtained success. There have doubtless been many instances of recovery after operation, the details of which have not yet been published; for instance, at one hospital—the Royal Free[8]—there have been two successful operations on children during the past two years for intussusception, and although one child died some weeks later from pneumonia, the fatal disease apparently bore no relationship to the operation. Although the question as to the advisability of performing abdominal section in these cases has been to a certain extent unsettled, there is an increasingly strong feeling in favour of it, should the intussusception not be relieved in the early stages by the methods—injection, insufflation, &c.—usually employed. In commenting on his case, Mr. Annandale laid great stress on the importance of early operation.

[1] Mirror of Hospital Practice, vol. i. 1889, pp. 170, 171.
[2] Barker: THE LANCET, vol. ii. 1888, p. 263.
[3] Operators: Nuck, 1692; Fuschsius, 1824; Wilson, 1831; Howse, 1874; Bellamy, 1879; Kleberg, 1879; Burckhardt, 1883.
[4] THE LANCET, vol. i. 1889, p. 171.
[5] Ibid., vol. ii. 1888, p. 888.
[6] Transactions of the Medico-Chir. Soc., Ed., 1888-9, New Series viii., p. 74-78.
[7] Med. Record, New York, 1890, xxxvi., p. 113.
[8] Operators: Messrs. Barrow and Berry.

The case was that of a married woman aged twenty-six, and the symptoms came on suddenly on the morning of July 8th, 1890. At about 6 A.M. she felt a sharp pain in the lower part of the abdomen, which lasted from five to ten minutes, and then ceased. In about a quarter of an hour the pain returned, and after that she had about two attacks every hour. Each pain was of the same character, was felt at the same spot, and lasted the same time, and with most attacks she vomited a greenish material. She compared the pain to being tied in a knot. During the day the bowels were opened freely.

In the evening she was admitted into a medical ward of King's College Hospital under the care of Dr. Dalton. She was then rather collapsed, but soon rallied; and when examined a slightly tender, sausage-like mass was felt in the right iliac fossa. When seen during the visit on the afternoon of the 9th she was better, the attacks of pain and vomiting having occurred less frequently, and having been less severe. This was due to the opium which she had been given. She had, however, passed two large pultaceous motions, which consisted chiefly of blood, partly darkened and partly bright red, as if recent. When not in pain she looked quite well; there was no fever, and the urine was normal in quantity and quality. The tumour was now very evident. It was cylindrical, about as thick as a German sausage, and about three inches long. It lay in the right iliac fossa, with its long axis directed upwards and to the right, but it was freely movable, and could be shifted into the right lumbar region and also into the umbilical region. It was slightly tender; but, except when the tumour was touched, palpation was painless over every part of the abdomen, and there was no abnormal distension. During the night the attacks of pain continued to be infrequent, but in the morning the tumour seemed larger, and as the symptoms pointed clearly to intussusception Mr. Cheyne was asked to see the case. He concurred in the diagnosis, and it was agreed that abdominal section should be done. The patient having been anæsthetised, and the front of the abdomen thoroughly purified, an incision about three inches long was made in the middle line from a little below the umbilicus downwards. The peritoneal cavity being opened, the tumour (which was very freely movable) was found to be an ileo-cæcal invagination, and a cautious attempt was made to pull out the invaginated portion. As this was not successful, the incision was enlarged sufficiently to enable the hand to grasp the tumour, and the invagination was then squeezed out without any special difficulty. The wall of the affected part of the bowel, especially that of the cæcum, was much thickened by inflammatory exudation; but though the peritoneal surface was dull there was very little lymph on it. The peritoneal cavity was not washed out. The wound in the peritoneum was closed by a continuous catgut suture and the muscles and skin brought together by interrupted sutures, and the usual antiseptic dressings were applied. The patient passed a good night, and from the time of the operation she had no further pain or vomiting. There was no fever. She was kept on milk diet for two or three days, and was given one grain of opium every four hours. The opium was then stopped and the diet gradually increased. The bowels were moved freely after an enema on July 18th, and on that day the wound was dressed for the first time and found to be healed. The patient was discharged on Aug. 1st quite well.

Remarks by Dr. DALTON.—As regards the etiology, the patient was inclined to attribute her illness to great nervous excitement and depression produced by a domestic quarrel during the night; and she said that she felt an internal trembling just before the pain occurred. She had, however, recently eaten some stale stew. This may have been indigestible, but it still remains probable that the emotion may have effected the abdominal sympathetics in such a way as to cause the irregular intestinal contractions which produce intussusception. The frequency of intussusception in children (who are obviously emotional subjects) and its rarity in adults (when not due to polypi) would tend to strengthen this supposition. The extreme mobility of the tumour was very remarkable, and it was found at the operation to depend on the presence of a long meso-cæcum. The tumour was usually felt in the right iliac fossa, but while the anæsthetic was being administered it disappeared, and was only found (after some search) under the lower margin of the liver. Another point worth noting is that, after the wound was sewn up, the tumour could still be felt through the abdo-

minal wall almost as distinctly as before the operation. This was due to the thickening of the wall of the gut by congestion and exudation, but had we not known that reduction had been effected, we might have supposed that the invagination was still present. When the wound was dressed the tumour had disappeared.

ANCOATS HOSPITAL, MANCHESTER.

CHRONIC INTESTINAL OBSTRUCTION, DUE TO THE SWALLOWING OF SAFETY PINS; RECOVERY; REMARKS.

(Under the care of Mr. E. STANMORE BISHOP.)

WE give below a somewhat detailed account of an interesting and unusual case of chronic intestinal obstruction due to the presence of safety pins in the intestinal canal. The diagnosis of the case was, as pointed out by Mr. Bishop, obscure, until the passage of one of the pins per rectum gave the clue as to the exact nature of the obstruction. The danger of the practice of placing various kinds of pins, &c., in the mouth for convenience has not often been so well exemplified. When it is added that at least one of the pins was opened, that they were almost two inches in length, and when their shape and characters are recollected, it is not surprising that the patient experienced both pain and obstruction during their passage; it is a matter for congratulation that perforation of the bowel and fatal peritonitis did not occur. A case is recorded in which a child swallowed a large-sized diaper pin, which was passed per rectum without any trouble;[1] this was, however, closed, and the sharp point protected by the guard.

On Aug. 30th, 1890, Mr. Bishop was requested by Dr. Frank Holmes of Ardwick to see a patient in consultation with the following history. On or about March 23rd Mrs. T——, a midwife, aged forty-one, was lifting a bed of some weight, in order to push a carpet underneath, when she heard and felt something crack at a point midway between her ribs and umbilicus, and slightly to the right side. Up to that time the bowels had acted regularly, except about five years ago, when she says she had a twist of the bowel in the left groin, which was remedied in two or three days by inflation. She had suffered from renal calculus and consequent cystitis, and had just about that time had two small calculi removed under chloroform. She was an indefatigable worker, frequently attending one or two labours a night, even whilst the calculi were passing. She has had peritonitis once severely in consequence of, as she thinks, a fall over a chair. The twist mentioned above followed this during convalescence. A previous attack, not so acute, followed five to six weeks after confinement. At the time of the crack the bowels were moved violently three times in an hour, with great pain. She was sick, faint, and cold for some hours. Some days passed without any further stool, she thinks fully a week. An accumulation became manifest, which was removed by enema. She does not know whether blood was passed. Since that time, some five months, she has never passed a stool without an injection; sometimes not even then. The stools have become progressively smaller, until now they are the size and shape of a slate pencil. Blood has been passed three times, each time after an injection, and each time at the end of a stool. The blood was bright. The amount the first time was about one ounce, the second more than half an ounce, the third about two drachms. Before the blood passed each time there was intense pain at the point before mentioned, not at the anus. Pain has never been entirely absent at this point since March 23rd, but it is subject to severe exacerbations. For the last two weeks and six days no stool has passed even with enema, which has been used frequently, except on Aug. 29th, when, after an injection of oil with massage, a small pencil-shaped mass of fæces passed. Since the same time of actual stoppage there has been no gurgling or sound of movement heard over the right side, until the 29th, when distinct gurgling sounds were heard and felt in the ascending, and right half of the transverse, colon. Paroxysmal pain follows each injection, the sensation being described by the patient as though something were being forced through a narrow opening; this lasts a minute or so and gradually fades away. The pain is always referred to the same spot mentioned above; the first pain is always the most severe, each succeeding one becoming less intense. No solid food has been taken since the stoppage became absolute, partly because of anorexia, partly from dread. Vomiting has been almost constant since March 23rd, and has been daily since the actual stoppage. The matters vomited have been those swallowed, mixed with mucus and bile. Only once (Aug. 25th) they were very offensive, with a smell of rotten eggs. An increase of from three to four inches in girth has been noticed at the level of the sternal tip. She has lost flesh especially during the last three weeks. Flatulent distension is pretty constant. Her normal pulse is 72; it is now usually 64; to-day it is 100. Her temperature has been irregular; frequently high during the last three months. Has been as high as 102°; to-day it is 101°.

Aug. 31st.—Examined under chloroform. No mass can be felt. The right side of the abdomen, both to palpation and percussion, appears to be fuller than the left. There is a slight increase in the feeling of resistance over the transverse colon, but this is not limited to any one point. All the abdominal organs are normal in shape as far as they can be felt. There is no rectal abnormality.

Sept. 2nd.—The pain has been very severe to-day and more continuous. Has had a restless night, and passed two drachms of blood per anum this morning. As she cannot take morphia, half-grain doses of belladonna are given three times a day.

5th.—Complains much of flatulent distension, which presses, she says, on the tender point. An injection of two pints of warm water came back at once, bringing a good deal of flatus, was coloured brown, and smelt offensively. As there had been very much pain, a hypodermic injection of morphia and atropine was given, which gave relief, but although she was not aware of its composition, she was attacked by spasm for two hours, and again, after an interval of an hour, for one hour more. These attacks were relieved by hot whisky. She took some tapioca pudding, which returned three hours later. No blood. Vomits now about twice daily.

On the 6th and 7th the patient complained of much pain still at the same point, and was still sick, but persisted in persevering with her duties as midwife, in the course of which she was frequently out once or twice each night.

8th.—The pain is more severe than ever. She is still vomiting bilious material. No stool has passed, and the pain is still located at the same spot. The question of laparotomy was suggested, but it was decided to try first a large enema (two pints) of warm water, introduced by the irrigator, with a fall of three feet, under chloroform, the patient lying upon a couch, of which the lower extremity was raised two feet. After the fluid had been running for a few minutes a small mass of fæces, the size of a small walnut, was felt through the vaginal wall floating in the rectum; on being removed it appeared of normal colour and consistence. On recovery from chloroform she complained of great pain. The injection brought down two more fæcal masses, and was itself deeply stained. Whilst the bowels were moved she was violently sick, the vomit being merely mucus.

9th.—Is much better. The sickness and pain have ceased, but there are great soreness and tenderness; for the first time since March she can bend with ease.

13th.—Has had no further pain over the old spot, and has felt generally better, so that she is still acting as midwife; but there is now marked pain and swelling at a point midway between the left anterior superior spine of the ilium and the umbilicus. She has also passed some clots of blood per anum, and has been faint frequently.

14th.—Under chloroform another enema of two pints of warm water was given as before. On its return, deeply stained, but with no actual masses, a large closed safety-pin was found in it. On recovering she still complained of pain at the new spot. When shown the pin she remembered an occasion when it might have been swallowed. As a midwife she is in the habit of holding two or three pins in her mouth whilst fastening the binder. On this occasion she remembers fainting whilst so occupied and supposes that she must have then swallowed the pin found, but she cannot be sure whether she then had one, two, or three in her mouth. She was advised absolute rest and small doses of belladonna, but instead of taking this advice she persisted in attending to her business, although the pain became more severe and caused her, according to her own account, to

[1] Sajous, vol. iii. 1889, p. 14.

stand still in the street or to rest on the doorsteps. She also passed more blood per anum.

24th.—The swelling at the last point is larger and the pain is more distinctly of a sharp stabbing character. Slightly harder nodules can be felt in various parts of this swelling, which is the size of half an orange. About half an ounce of black clots was passed this morning. Under chloroform, another enema of three pints of warm water was given by irrigator as before.

25th.—In the material passed last night, amongst fæcal fragments and stained water, is the guard of another safety pin; with this is another clot. She complained of extremely acute pains at the spot last mentioned and along a line from this to the anterior superior iliac spine on the left side. She is vomiting, and the vomiting greatly increases the pain. The pulse is slow, poor, but not wiry. Temperature 98°. Another enema was again promptly given under chloroform as before, and on recovery from anæsthesia violent straining with great pain at the anus set in. In the rejected fluid was found the remainder of a second pin.

26th.—Complains of great soreness both at the point of swelling and at the anus, but there is no more of the stabbing pain and no blood. There is persistent sickness, probably due to the chloroform. Is too weak to rise, and for the first time admits it.

28th.—Has passed one stool containing two hard masses. At night another enema was given without chloroform, which brought away a largish stool of normal colour, but very thin, and a large quantity of clots. There is persistent pain at the left side, on the level of the anterior superior iliac spine. Abdomen is tender, and rigid in this region, but supple elsewhere. Temperature 103°.

29th.—Is very faint. Passed more blood per anum. The pain being very severe, a hypodermic injection of morphia (⅓ gr.) with atropine was given. She objected to a larger dose, as she wished to go out and visit some cases. Came home in three hours very faint and ill. Temperature 101°. Pain very severe. Morphia hypodermically (⅓ gr.).

30th.—Has been vomiting. Slept till 3 A.M. Abdomen shows much limited fulness over the point last complained of, which is extremely tender to touch. No more blood has passed. Cannot rise from bed. Is taking Benger's food. No stool. As it appeared impossible to get her to take the necessary rest at home, and as it was doubtful whether or not another pin might be present, she was strongly advised to go into hospital.

Oct. 2nd.—The patient came into Ancoats Hospital. She has had no stool since the 29th ult. There is still well-marked prominence at the point over the sigmoid flexure; this is not dull on percussion; is nodular to palpation. Temperature 98·4°; no sickness.

3rd.—Slept for four hours after a dose of croton chloral. No vomiting. Abdomen is very easy; it is covered by glycerine and belladonna, with a compress of hot, wet Gamgee tissue, covered by oiled silk. There has been no stool. Another enema of two pints of warm soap-and-water was given by the irrigator, the patient being in the semi-inverted position. Several scybala, the size of walnuts, were brought away, and the swelling spoken of above decreased at once. No blood followed. Slept but little.

7th.—Appetite has much improved. Another enema was given on the 5th, but no result. Slept well last night after twenty grains of sulphonal. The swelling is now scarcely perceptible, and no longer tender, even to deep pressure. Another large soap-and-water enema, given as before, brought away more scybala, and for the first time some large, well-formed fæces, but no blood; all rather offensive, but not so much as before. Patient very faint afterwards, and complains of some abdominal aching. After half an ounce of brandy much improved.

8th.—Had twenty grains of sulphonal last night, and slept well. Appetite greatly improved. Not the least pain. To have one-grain euonymin pill three times a day.

9th.—Has passed two good, healthy stools with perfect ease. Has slept well. As she was almost morbidly anxious to get back to work, she was allowed to leave hospital.

Remarks by Mr. BISHOP.—This is one of the cases which do so much to render pointless the incessant demands of abdominal surgeons for early laparotomy. The history of the case, so far as known during the earlier period of treatment, and when diagnosis was most required, gave no hint of the actual cause. It was only after the first pin was passed that she attempted any explanation; even then she could only surmise that the swallowing took place during a fainting fit, and whilst fixing the binder for some of her midwifery cases. She admitted then that she was in the habit of putting these safety pins in her mouth. The very course of the attack was calculated to divert attention from the actual fact. No obstruction at the ilio-cæcal valve, or at the pylorus; the pins caused no trouble as to pain until they reached the centre of the transverse colon. The obstruction became very gradually less, until, after it had become absolute, an enema brought away a small pencil-shaped stool, which might have been forced through a narrow stricture. Of course, when once one of the pins had come away the case became easy to treat, but still not easy to understand. It is, perhaps, hardly necessary to emphasise the extremely different results obtained by the use of the steady stream of the irrigator acting upon a bowel in a cavity, the walls of which have been paralysed by chloroform, to those obtained with an interrupted and spasmodic stream, as obtained by the use of an ordinary enema, and whilst the patient's muscles are all acting.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Hydatid Disease of Floor of Pelvis.—Occlusion of the Subclavian Artery from Contusion.—Aneurysm of Heart.—Atrophy of Heart.—General Emphysema following Ulcer of Vocal Cord.—Caseous Gland opening into Œsophagus.

AN ordinary meeting of this Society was held on Nov. 18th, the President, Dr. W. H. Dickinson, in the chair.

Mr. JOHN R. LUNN brought forward a case of Hydatid Cyst between the Bladder and Rectum, associated with Retention of Urine. The specimen was taken from a man aged sixty-six, whose first admission into St. Marylebone Infirmary was on Oct. 29th, 1889, with retention of urine. On admission, a large catheter was able to be passed into the bladder under chloroform, the eye of which soon got blocked with blood-clots, so the bladder had to be tapped above the pubes, and the cannula was fastened into the bladder, which was removed in four days. The urine was alkaline, and contained blood and albumen. On Nov. 23rd (twenty-five days after admission) it was noted that the bladder could be completely emptied by passing a catheter by the urethra, but there was still some dulness on percussion above the region of the bladder. The patient took his own discharge on April 17th, 1890. He was readmitted on Aug. 6th following, again with retention, and appeared very ill. His bladder was again aspirated by the pubes, which produced immediate relief. The urine contained pus, albumen, and blood. On examination by the rectum, a large soft mass could be felt between the rectum and bladder, after the bladder was emptied. His temperature became very hectic, and he died two days after admission. At the necropsy, on opening the abdomen, it was found that the bladder was pushed forward in front by a large tumour from behind, about the size of a child's head, which appeared more or less adherent to the pelvic cavity and intestines. This tumour consisted of a hydatid cyst; it was triangular in shape, the base of the triangle looking upwards. On puncturing it a large amount of clear fluid came out, which appeared ordinary hydatid fluid. Amongst the fluid were a number of round whitish bodies about the size of a pin's head, which under the microscope appeared to be a number of scolex heads joined together. No communication was found between the bladder and the cyst. The former seemed to be thickened and hypertrophied. The vesiculæ seminales were much enlarged and flattened. One vas could be traced upwards on the wall of the cyst, not on the bladder at all. The ureters were likewise lying against the sides of the cyst. The kidneys were both disorganised; the left more advanced than the right. The question arose, how these cysts were developed in the pelvic cavity. The right explanation appeared to be that the embryo, getting into the peritoneal cavity, and gradually gravitating downwards, eventually settled in the pelvic cavity. Cases were on record in which hydatid cysts had been found between the bladder and rectum, near the neck of the bladder, but he could not find many cases where

they had been quite between the bladder and rectum. It was not until the case had been cleared up by a necropsy that its real nature was discovered.—Mr. JAMES BLACK referred to the case of a boy who was admitted into St. Thomas's Hospital some years ago with a distended bladder. After catheterisation it was found that a fluid swelling remained, which proved on tapping to be hydatid.—The PRESIDENT inquired whether there had been discharge of hydatid material by the bladder or rectum.—Mr. SHATTOCK remarked on the absence of disease of the liver in this case, and said the much more reasonable explanation of its occurrence was to suppose that the parasite had made its way directly through the intestine into the peritoneum, and thus had reached Douglas's fossa.—Mr. BOWLBY related another similar instance of a case in St. Bartholomew's Hospital. The patient died of obstruction to the ureters and disease of the kidneys. It proved to be a case of hydatid disease of the floor of the pelvis.—Mr. TARGETT said he had dissected seven of these cases, and had found the cyst situated in all between the recto-vesical sheath and the back of the bladder. This situation certainly suggested that the parasite had perforated through the bladder and had not come from the intestine or peritoneum.—Mr. IUNN, in reply to the President, said there had been no discharge of hydatid material. The cyst was situated close to the peritoneum, and he thought it was derived from that cavity. The published records showed that the diagnosis of this condition had often been attended with difficulty.

Mr. BOWLBY showed a case of Partial Rupture of the Right Subclavian Artery with Extensive Separation of the Internal and Middle Coats. The patient was an old woman who had been run over and had sustained a fracture of the ribs on the right side and of the right clavicle. On admission into St. Bartholomew's Hospital, it was found that the right upper extremity was cold and pulseless, a condition which continued until the death of the patient next day. The post-mortem examination showed a fracture of the right clavicle, and the first and second ribs on the right side, the second part of the subclavian artery being bruised and flattened. On laying open the vessel, it was discovered that at the junction of the first and second portions the internal and middle coats had been cleanly divided at right angles to the long axis of the vessel. On the cardiac side of the injury, the coats had not retracted at all, nor had they curled in towards the lumen of the vessel. On the distal side, however, the inner and middle coats had been entirely stripped from the outer for a distance of more than an inch, and had been completely invaginated and thrust as a plug into the lumen of the artery beyond, so that the third part of the subclavian was plugged by the torn coats which ought to have lined the second part of the vessel, and on the rough surface of the second part of the artery the blood had subsequently clotted. It was clear that after the division of the internal and middle coats the blood-stream had made its way between the middle and internal coats, and, having stripped up the former, had thrust it with the inner coat into the lumen of the vessel beyond, and had so stopped the further passage of blood along the damaged trunk. He believed this specimen illustrated a hitherto undescribed pathological process.

Dr. J. A. ORMEROD showed a case of Aneurysm of the Heart. There was a bulging of the wall of the left ventricle, originating from the upper and left portion of that wall, behind the small flap of the mitral. Its size was that of an orange; it contained much laminated clot, and it was unruptured. The rest of the heart was practically normal, as were the other organs, excepting some engorgement of kidneys and liver. The patient, whose age was thirty-five, died suddenly whilst at work.—The PRESIDENT inquired if embolism were present.—Dr. GULLIVER described a similar case, which he exhibited as a card specimen.—Dr. WILKS said cases formerly described were regarded either as simple aneurysm or softening of the tissue of the ventricular wall. Some years ago he examined the body of a medical man who died suddenly; there was a fibrinous non-syphilitic deposit on the wall of the ventricle which had softened, burst, and caused sudden death. Fagge had taken the view that most cardiac aneurysms had been formed in this way.—In reply to questions of the President, the authors stated that there was no syphilitic history, nor evidence of specific action in other parts of the heart.

Dr. GULLIVER showed a case of Simple Atrophy of the Heart. It weighed only 3¾ oz., and was one of numerous organs taken from a wasted subject, a woman aged twenty-eight. The cadaver weighed but 3st. 10lb. The right lung (œdematous) weighed 11¼ oz., the left 5¼ oz. The liver scaled 1 lb. 14 oz., and the spleen but 2 oz. The brain appeared to have quite escaped, weighing 42 oz; the kidneys 4 oz each. The intestines were unusually translucent, and the uterus was of small size. She died of diarrhœa, vomiting, and œdema of legs, from which she had suffered for about six months. The emaciation continued in spite of the imbibition of an abundant amount of nourishment. The case appeared to be one of starvation from mal-assimilation.—The PRESIDENT said that it was not unknown for the heart and other organs to become exceedingly small as the result of starvation. He quoted the case of a man who died of starvation, which he voluntarily endured to cure dyspepsia.

Dr. MONTAGUE MURRAY showed a Larynx with a sharply cut Circular Ulcer just below the posterior termination of the right vocal cord. Its floor was formed by the cricoid cartilage. The specimen was taken from a female child thirteen months old, who had suffered from birth from cough. On admission broncho-pneumonia was diagnosed. Five days after this, and twelve hours before death, subcutaneous emphysema appeared in the neck. This was most marked on the right side and in the episternal notch, but extended from the jaw to the clavicle. Six hours later it appeared in the right cheek. At the post-mortem examination interstitial and broncho-pneumonia were found in addition to the ulcer above described, but no reliable evidence of syphilis, tubercle, or typhoid could be obtained. Two very similar cases had been recorded, one by Dr. Wilks and one by von Ziemssen. Both were children, and both had typhoid. Given a deeply excavated ulcer below the vocal cord, then the mechanism by which air was driven into the cellular tissue during coughing was readily understood. The cause of the ulceration in this case was uncertain.—Dr. WILKS said the specimen exhibited was a remarkable one. In the case he had described typhoid was present, but the association of that malady with laryngeal ulceration was not then recognised.—Mr. LUNN had had under his care a bad case of typhoid associated with laryngeal ulceration, in which local emphysema developed.—Mr. SHATTOCK had seen two cases of typhoid ulceration of the larynx, unassociated with emphysema.

Dr. VOELCKER exhibited a specimen of Caseous Gland opening into the Œsophagus, which was obtained from a boy aged nine years, admitted to the Hospital for Sick Children, Great Ormond-street, under Dr. Cheadle, with typhoidal symptoms. He was found to be suffering from cystitis and septicæmia, from which he died seven days later. At the necropsy, in addition to extensive bladder, kidney, liver, and spleen mischief, there was found a mass of cretaceous glands at the hilus of the right lung. There was no ulceration into the air passages, and no tubercle was found in the lungs. On opening the œsophagus a perforation five millimetres in diameter was found rather to the right of the middle line on the anterior wall, and a little below the level of the bifurcation of the trachea. The edges of the opening were puckered and led into a cavity in which caseous material could be seen. There was no history of any œsophageal trouble. The case was brought forward as an unusual result of the presence of caseous glands at the root of the lungs. In the last thirty years—i.e., in 2504 post-mortem examinations at the Hospital for Sick Children—there had been only three other cases of glands rupturing into the œsophagus, but in two of these rupture took place also into the air passages. In one other case from the same records there was an oval ulcer opposite a caseous bronchial gland, but the notes mention that the floor of the ulcer looked healed, and it did not appear that the ulceration had started from or in any way been caused by the gland. In all these four cases there was general tuberculosis, which was not the case in the present instance. Caseous glands at the root of the lung were extremely common, and their rupture into the air passages by no means a rare event, being frequently unattended by any clinical symptoms. The frequent occurrence of malignant disease of the œsophagus at the level of the bifurcation of the trachea had suggested to him the possibility of its being due to the irritation caused by enlarged bronchial glands, and these cases, together with one from the same source in which there was marked

hyperæmia of the œsophagus opposite an enlarged bronchial gland, seemed to him to lend this view some support.

Dr. PENROSE had made a necropsy in a case somewhat similar to the one recorded. Breaking-down glands were found, and openings existed which communicated with the roots of both lungs, the œsophagus, and the trachea. The child was about seven months old.

The following card specimens were shown and discussed:—

Professor CROOKSHANK: Preparations of Bacillus Tuberculosis.

Dr. ORMEROD: Atrophy of Cerebral Convolutions near the Sylvian Fissure.

Dr. GULLIVER: Aneurysm of Heart.

Mr. TARGETT: Cysts on the Vasa Deferentia.

Dr. PERRY: Diffuse Syphilitic Fibrosis of Lung.

Dr. ROLLESTON: (1) Stricture of Jejunum; (2) Rupture of Liver, life prolonged for a week.

Dr. DELÉPINE: Necrosed Pulmonary Tissue becoming Tubercular.

MEDICAL SOCIETY OF LONDON.

"Uratosis."—The Relationships between Diabetes and Insanity.

AN ordinary meeting of this Society was held on Nov. 17th, the President, Mr. Knowsley Thornton, in the chair.

Sir WILLIAM ROBERTS communicated a paper on the Deposition of the Crystalline Urates in the Tissues, considered as a separate pathological incident, with a suggestion for a distinctive name. He stated that the occurrence of such deposits was usually regarded as pathognomonic of the gouty state, but the converse of this proposition was not accepted, and clinical observers had always recognised the existence of a pathological state—to which the names of suppressed, latent, or larval gout had been applied—in which no uratic deposits could be discovered. On the other hand, the collateral conditions associated with uratic deposits differed so much from each other that they certainly would never have been classed together as various forms of one and the same disease had there not been this single connecting link of uratic deposits. Again, although the arthritic troubles of gout might be reasonably attributed to the mechanical irritation of the uratic deposit, there were other visceral and nervous troubles, assumed to be truly gouty, which could not with our present knowledge be thus explained. Further, uric acid existed in the body of the gouty in two very different states—namely, in a state of solution in the blood, and precipitated in the solid form in the tissues. To the former of these conditions the term "lithæmia" had been applied, and it was invoked to explain the occurrence of the visceral and neurotic disturbances just mentioned. It would probably be well, in the interest of clear conceptions respecting gout, and as likely to contribute to the promotion of definite lines of further investigation, if we were also to isolate in our minds the latter of these two conditions—the precipitation of the crystalline urates—as a detached and independent pathological occurrence, separate from all antecedent and collateral incidents, and erect it into a precisely definable symptom or physical sign, apart from everything else. In doing this, we should only be repeating what had been already done in regard to glycosuria in diabetes, to albuminuria in Bright's disease, and in the separation of thrombosis from phlebitis. Following these precedents, he ventured to suggest that uratic precipitation should be separated from its associated connexions, and that it should be known by the name of "uratosis." Such a name would express clearly and precisely the meaning intended to be conveyed, it would bring into clearer relief the distinction between uric acid dissolved in the blood and uric acid precipitated as crystalline urate. The exact state of uric acid in lithæmia was not precisely known; it certainly did not exist in the free state, but whether it were quadrurate, or biurate, or a mixture of the two, or sometimes one and sometimes the other was not known. On the other hand, in uratosis we knew exactly what we had to deal with, for uratic deposits were always composed of crystalline sodium biurate, and nothing else. Lithæmia was only the exaggeration of a normal condition, but uratosis, even in the minutest degree, was pathological. Further investigation might reveal the fact that the visceral neuroses were not the result of any diffuse lithæmia, but were the consequences of actual uratosis, though microscopic in amount. Experiment had convinced him that in some rare cases of gout the blood might become so laden with uric acid as to be within striking distance of a general uratosis throughout its entire mass. The establishment of the possibility of such a condition would enable us explain the occurrence of some very obscure incidents in the history of gout. The adoption of the new name would also enable us to discuss more freely and with greater precision of language the true relation of uratic deposits to the etiological factors which were concerned in their production; thus, in lieu of speaking of ordinary gout and of saturnine gout, it would be more accurate to speak of gouty uratosis and saturnine uratosis, for it was difficult to believe that lead poisoning produced the same constitutional diathesis as that which existed in true gout. It was much easier to imagine that the gouty diathesis and lead poisoning, while differing in all other respects, had this one tendency to uratosis in common. So with the analogy that could be drawn between uratic deposits and urinary concretions. A large group of cases of uric-acid gravel and calculus were the undoubted offspring of gout, but there was another group of cases, occurring chiefly among the poor and among rice-eating populations, which had no kinship with gout, and were the result of a totally different set of etiological factors. Nevertheless, the clinical and pathological phenomena of the two, depending on the mechanical irritation of the concretions, were practically indistinguishable. Though some of the facts known with regard to the hereditary transmission of gout appeared to be against this hypothesis, yet the objection was answered by the fact that gout was not in reality a homogeneous nosological unity, but only a loose bundle of morbid tendencies, and these several tendencies might be transmitted in unequal degrees. It must be remembered that senescence, nervous shocks, local injury, and trophic changes were other factors which had considerable etiological force in the production of uratic deposits, and two or more of these might act in combination in determining the occurrence of uratosis. By the adoption of this name we should gain something in regard to a clearer apprehension of therapeutical indications; we could aim at minimising the incidence of the predisposing cause, or we could aim directly at the uratosis itself. And should it turn out at last, after further inquiry and investigation, that there did subsist an absolute and invariable solidarity between uratic deposits and the gouty diathesis, we should lose nothing by adopting these proposals; but, on the contrary, should gain in facility of description and in clearness of conception in regard to the main incidents of the gouty state.—The PRESIDENT would like to have heard an opinion expressed as to the permanence of these deposits; he himself was convinced that they were removable by alkaline waters &c. He wondered what effect the supervention of a lithæmia would have upon an already existing uratosis.—Sir ALFRED GARROD said that it would be admitted that whatever might be the origin of gout, whether neurotic or not, all the symptoms were connected with lithæmia; and in regard to uratosis, it occurred in all cases of articular gout, grave or slight. In one instance he had demonstrated an abundant deposit in the joint of a man who had had but one attack, and that thirteen years before. He was not sure that in other non-articular cases there was a similar deposition of uric acid. All the cases were connected, not necessarily with a deposition, but with a change in the urate of soda. In the eczematous fluid of gouty subjects there was no uric acid; the inflammation appeared to destroy it. He gave his adhesion to the adoption of the name which the author had proposed.—Dr. ANGEL MONEY thought that both the state of the blood and the state of the tissues should be remembered in discussing these conditions. In some instances it seemed that the tissues had a liking for the uric acid, though the blood was not overcharged at the time.—Sir WILLIAM ROBERTS, in reply, admitted that at times the deposits disappeared, and they might remain after the patients ceased to be gouty. The term "uratosis" might be applied to the process, and tophi would be called "uratomata." In some cases of Bright's disease and uræmia the blood was charged with uric acid and yet no signs of gout developed.

Dr. SAVAGE then read a paper on Some Relationships which existed between Diabetes and Insanity. Most diseases had a special mental aspect; thus with disorders of the digestive tract depression was common, while the mental tone of consumptives was bright and hopeful. With diabetes there was a tendency to a depressed mental tone, and beside this there were some specially interesting connexions between the two disorders. He did not claim all cases of diabetes as

of neurotic origin, but he believed that some were. The facts which pointed to the central nervous origin of some cases of diabetes were overwhelming. Experiments on animals, disease and injuries in man, had shown that brain disease did in some cases excite the disease. Writers on general medicine admitted that there were similarities between the causation of diabetes and that of nervous disorders; only very few asylum physicians had, however, recognised the relationship which he believed to exist. Dr. Clouston of Edinburgh, however, had described a class of diabetic melancholiacs; and Dr. Maudsley, in his Pathology of Mind, had clearly pointed out that there was a very distinct connexion by origin between diabetes and neuroses. Diabetes was to be regarded as a group of symptoms which for convenience had to be looked upon as forming a fairly definite diseased process. Among the insane he had not found sugar at all commonly in the urine. The facts upon which this paper were founded were drawn chiefly from Bethlem Hospital. He had records of forty patients in that hospital who had diabetic relations, ten of them having diabetic parents or grand parents, fourteen having diabetic brothers or sisters, twelve aunts or uncles and three cousins suffering from this disease. Besides these there were twelve insane patients who had both insane and diabetic relations, and ten patients who were both insane and diabetic. Nearly all the cases with diabetes and insanity were melancholic. The patients who had diabetic symptoms and then became insane almost all lost some or all of these symptoms during the period of mental disorder. There appeared to be a kind of alternation between the two disorders. He submitted cases in which acute diabetes was replaced by acute melancholia, this latter giving place again to diabetes, which once more had been replaced by temporary mental depression. In two other cases elderly men suffering from diabetes became melancholic some time before the fatal termination of the disease, and during their mental disorder no sugar appeared in the urine. In one case of general paralysis of the insane the diabetic symptoms, which had lasted two years at least, disappeared for over a year, only to return a few months before death. In conclusion, he pointed out that similar causes might give rise to either insanity or diabetes, that diabetes occurred in the same families as did insanity, and that there might be an alternation, so that insanity occurred in the one generation and diabetes in the next; again, in diabetes itself the symptoms, one or all, might be replaced for a longer or shorter time by mental symptoms.—Dr. BEEVOR said he had examined the urine of a large number of cases of epilepsy for sugar with negative results, and there seemed to be no especial relationship between diabetes and epilepsy.—Dr. ANGEL MONEY pictured to himself in patients about to become insane a nerve perturbation travelling about from one part to another and producing, when settling down, either diabetes, general paralysis, or paroxysmal neuralgia. It was curious that the diabetes disappeared so completely in these cases.—Dr. SIDNEY PHILIPS asked if diabetes were common in epileptic mania.—Dr. HADDEN inquired if glycosuria were included in the paper.—Sir WILLIAM ROBERTS said that the urine of apoplectic people was often glycosuric, and these cases should not be classed with real diabetes.—Dr. SAVAGE, in reply, said that sugar was not common in epileptic mania. It was very difficult to separate glycosuria from diabetes in insane cases, for directly they mixed their characters became masked. Some of the patients certainly suffered with true diabetes, but others were glycosuric.

OPHTHALMOLOGICAL SOCIETY.

Operations for Ptosis.—On Individual Differences in the Degree of Latent Lateral Deviation of the Eyes on looking upwards and downwards.—Cases of Double Hemianopsia.—Case of Alexia.

AN ordinary meeting of this Society was held on Nov. 13th, Mr. Henry Power, F.R.C.S., President, in the chair.

Dr. BERRY (Edinburgh) read a paper commenting on most of the known operations for Ptosis, but especially upon the method employed by Everbusch and that introtroduced by Snellen, and called by their names. He had performed Everbusch's operation eleven times, and Snellen's six times, but had not always been satisfied with the results. However, in any case of ptosis which calls for operation at all he advised the performance of one of these two operations, because they are capable of producing at least as great an effect as any other operation, and because they admit of repetition if necessary, with a good chance of further improvement, or they may be followed by another operation, such as that devised by Panas.—The PRESIDENT mentioned cases in which he had shortened the tendon of the levator palpebræ.—Mr. TATHAM THOMPSON (Cardiff) gave as his experience that he had not found the method advocated by Professor Snellen effectual. In his own cases he had had recourse to subsequent shortening of the levator palpebræ by inserting threads.—Mr. LANG said that in cases where he had failed to tie the threads over a piece of drainage-tube they had sunk into the skin and caused the formation of small abscesses. Four cases had been operated upon, in all of which suppuration had occurred. Lately he had adopted Panas's operation, employing, however, a curved incision instead of a flap, with excellent results.—Mr. JULER had employed the superficial subcutaneous suture in the method described by Pagenstecher with admirable results, particularly in his last three cases.—Mr. MACKINLAY described a method employed by Mr. Hulke. A Graefe's knife was inserted at the outer extremity of the lid and passed along so as to separate the skin from the orbicularis muscle, the knife was then withdrawn and the skin puckered and maintained in a large wide fold. More recently he had himself preferred making three small folds instead of one broad one, and maintaining them by the insertion of stitches till the end of the second week. There had been no suppuration, and the results were good; but when the affection was unilateral he had not seen complete symmetry restored.—Mr. MCHARDY thought we were in want of a really satisfactory operation to remedy a pitiable deformity such as ptosis. From his own experience he thought Pagenstecher's operation was the best.—Mr. DOYNE mentioned three cases in which he had employed Snellen's operation, using three sutures. One had suppurated, but in all there was decided improvement. He thought that, considering how many structures were involved, perfect results could not reasonably be expected.—Dr. BERRY briefly replied to the remarks of other members.

Dr. BERRY also read a paper on Individual Differences in the Degree of Latent Lateral Deviations of the Eyes on looking upwards and downwards. He communicated the results of experiments he had made upon students and others in reference to the point above mentioned, and illustrated his remarks by diagrams. The cases were all examined by Maddon's glass rod, and of the total number (fifty), in nine the degree of convergence was the same on upward as on downward fixation, in twenty-eight the degree of convergence was greater on downward fixation, and in thirteen it was greater on upward fixation. The main conclusion drawn from the investigation was that increase in convergence downwards is only about twice as frequent as increase in convergence upwards. Dr. Berry referred to the increase in homonymous separation of the images in sixth nerve paralysis, which usually, though not invariably, occurs on looking down, and suggested that in these cases the increase may not be only the difference in latent deviations on upward and downward fixation, but also the difference in the effort made to unite the double images in the two positions.—Mr. WRAY said that in cases of latent deviation, for the examination of which he employed Stevens' photometer, he had usually noticed inequality of visual acuity in the two eyes. He suggested that it would facilitate the comprehension of intricate subjects such as that under consideration if the members of the Society were supplied with an abstract of the paper beforehand.—Mr. PRIESTLEY SMITH considered that Dr. Berry's paper and diagrams showed that there was not that close connexion between downward movement of the eyes and convergence and the converse as was formerly supposed to exist. He thought, further, that the presence of latent deviation might account for the giddiness many people experienced in looking down from a height, and the vertigo and headache often experienced in looking up—for example, in picture galleries—for any length of time.—In reply, Dr. BERRY stated that the experiments were all performed with the eyes directed to a distance of five metres, so as to ensure approximate parallelism of the optic axes. The question to be determined was whether the phenomena described depended upon physiological or anatomical conditions.

Messrs. H. R. SWANZY and LOUIS WERNER communicated an account of a case of Double Hemianopsia. They

alluded to the experiments on the dog and monkey by Munk and Schäfer, which showed that there was a definite correlation between certain parts of the occipital lobes and the different segments of the retina. In man also the same correlation was shown to exist in a case quoted by Dr. Henry Hun, in the *American Journal of Medical Sciences* for January, 1887, where, after an apoplectic seizure, a man lost the left lower quadrant and peripheral part of the left upper quadrant in each field, owing to a lesion involving the lower half of the right cuneus discovered at the necropsy two years later. This case goes to prove that the fibres from the right upper quadrants in each retina terminate in the right cuneus; and that the fibres from the lower quadrant of each retina terminate in the lower part of the right cuneus, or in the right gyrus lingualis, is rendered probable by a study of recorded cases. A similar relationship would of course exist between the left quadrants of each retina and the left cuneus and gyrus lingualis. The subject of the present communication was a man of forty-two, who had an apoplectic seizure in February, and was unconscious for three weeks. On his recovery he was unable to raise his left arm, gave contradictory accounts of himself, and had lost the right upper and both lower quadrants of each field. The remaining quadrant in the left field was accurately defined, but in the right extended a little into the left lower and right upper quadrant. The nature of the lesion was most probably hæmorrhage; and from the impossibility of indicating a position in which one lesion would be likely to produce the hemianopsia and brachial monoplegia, the authors concluded that there were two distinct lesions in the right hemisphere. A lesion of the internal capsule involving arm and vision must have included the leg *plus* sensation, which were not affected in this case. The paralysis of the arm was most likely due to a cortical lesion, judging from experience in other instances of monoplegia, and the loss of portions of the lower quadrant of the visual field was almost entirely due also to a cortical lesion, the only other situation which suggests itself being the optic radiations, where such a restricted invasion of the fibres is scarcely to be expected. Furthermore, in the light of Hun's case this lesion was in the lower half of the right cuneus The lesion in the left side of the brain causing loss of the right half of each field cannot be localised with so great a degree of probability. The absence of concomitant symptoms referable to that side of the brain suggests its site in the optic tract, radiations, or cortex. The absence of the hemiopic pupil negatives its being in the tract, and the optic radiations are unlikely, for the reasons adduced above, hence the lesion was also probably cortical and situated in the left cuneus and gyrus lingualis.—Dr. BEEVOR thought that there must have been a double lesion, and he referred to a somewhat similar case recorded by Dr. Hughes Bennett, in which after death, two lesions were discovered, one in the internal capsule and one in the cuneus.

Mr. RICHARD WILLIAMS (Liverpool) read an account of a miner, aged forty-two, the subject of Hemianopsia, who exhibited neuro retinitis and a very marked horizontal limitation of the fields of vision. He remarked that cases of horizontal hemianopsia were by no means common, but the loss of the upper half of one field and the lower half of the other rendered the present case unique in medical literature, though the possibility of such a condition was suggested by Wilbrans.

The same gentleman also described a case of Alexia occurring in a man aged fifty-seven. He could see words distinctly, but appeared as if beginning to learn to read, and could make no sense of them. He wrote readily from dictation, but could not afterwards read what he had written. After he had written part of a letter spontaneously, he was unable to read it, though he could recall the sense. Memory was somewhat defective, and he was more emotional than usual, but could say the names of surrounding objects without difficulty. The fields of vision presented the usual characters of right homonymous hemianopsia, the blind line reaching to within about 10° of the point of fixation. Otherwise the appearance of the eyes was normal. Improvement was very slow and incomplete.

The following cases and card specimens were shown:—

Messrs. CRITCHETT and JULER: Epithelioma of Cornea and Conjunctiva.

Mr. STANFORD MORTON: Detachment of Vitreous.

Mr. STEPHENSON: Bifurcating Retinal Veins.

Mr. WRAY: Two Cases of Retinal Detachment.

Reviews and Notices of Books.

Evidences of the Communicability of Consumption. By G. A. HERON, M.D. Glasg., F.R.C.P., Physician to the City of London Hospital for Diseases of the Chest. London: Longmans, Green, and Co. 1890.

THIS book, which is based upon the acceptance in its entirety of the bacillary origin of tuberculosis, makes its appearance at a time when the whole world is engrossed with the further development of his researches by the original discoverer of the tubercular bacillus. No one now can even profess to be ignorant of the vast change that occurred in our conceptions of tuberculosis when, eight years ago, Professor Koch gave so lucid and exhaustive an account of this micro-organism, thereby clinching the argument advanced many years previously by Villemin as to the existence of a specific virus for that disease. But Koch's discovery did more than this—it suggested that the "virus" was really of the nature of a parasite, which must have gained entrance into the body from without, and incidentally it demonstrated not only the "unity of phthisis," but the unity of all kinds of so-called strumous and tubercular affections in man and animals. The new teaching, although founded on experimental evidence of a most conclusive kind, was not universally accepted as a sufficient explanation of all the known facts of the etiology and pathology of the disease, facts which had been accumulating for years, and which seemed at first hard to reconcile with it. Nevertheless, the more the subject came to be studied under its new aspect, and particularly the unequivocal evidence of the presence of bacilli in phthisical sputa and in tubercular foci in all organs, so much the more did it gain in general acceptance, until it was only here and there that scepticism of its truth came to be expressed. It may now be said to hold the field, and, as Dr. Heron puts it, the *onus probandi* must be borne in future by those who raise objections to it. If the present discovery by Prof. Koch, which, he tells us, is the direct outcome of his bacteriological studies on tuberculosis, be also valid, what has been called the "bacillary doctrine" of tuberculosis must be regarded as absolutely proven.

The author of this book, a warm adherent of Professor Koch, was apparently early convinced of the truth of this doctrine, and his sole aim in the work before us is to show how the doctrine both lends support to and is itself supported by the view that pulmonary tuberculosis is a communicable disease. He deserves credit for not shirking the problem in any part, but for boldly declaring his belief that, tubercle being proved to be due to the bacillus, it follows almost as a corollary that it can only exist by transmission. The manner in which he sustains this thesis may be briefly summarised.

Opening with a review of Professor Koch's original researches, which afforded such strong proof of his contention that the bacillus is absolutely essential to every form of tubercular disease, not merely as a concomitant but as the sole causal agent, we are led to consider the evidence supporting this conclusion derived from records of accidental inoculation in the human subject and the liability to infecton by inhalation of dust contaminated with a parasite. In an appendix, compiled under the direction of Professor Koch himself, the facts of cases of transmission of the disease (the majority being instances of direct inoculation), published during the last eight years, are briefly given, and they afford substantial support to the argument. Dr. Heron considers that, in view of such records, there can be no doubt of infection by inhalation being a fruitful source of consump-

tion; and he proceeds to cite Dr. Cornet's investigations of the dust of dwelling-rooms and hospitals to enforce his contention. Dr. Heron himself has made some observations on the breath of consumptives, with the conclusion that bacilli seldom occur in it unless suspended in drops of saliva, which may be ejected by coughing.

One of the strongest pieces of evidence adduced in support of the communicability of phthisis is that to which a whole chapter is devoted, and which is based upon Dr. Cornet's masterly analysis of the statistics of the Catholic Nursing Orders of Prussia during the past twenty-five years. These institutions contain a yearly average of 4028 persons, who enter mostly about the age of twenty-five, and who at that time have, after medical examination, been pronounced healthy. Yet the average age of death amongst them is as low as 36·27 years, and no less than *three-fourths* of the great mortality in these institutions are assignable to tuberculosis. As Dr. Heron points out, this extremely high mortality rate at ages ten years below the average age attained in the most unhealthy of trades, demonstrates the existence of conditions in these communities which favour the spread of tubercular disease. The same reasoning, we opine, may apply to the undoubted preponderance of consumption in densely populated districts, but it is held that the conditions of deprivation of light and air are subsidiary to the facilities of infection afforded by overcrowding. It is difficult in this matter to avoid arguing in a circle, but at the same time the reasoning of Drs. Cornet and Heron is legitimate and logical. Further support is claimed for communicability from the report of the Collective Investigation Committee of the British Medical Association, especially in instances where there was no consanguinity between the parties, and it is pointed out that the main condition requisite is close and prolonged association of the healthy with the sick. The case with regard to the transmission of tuberculosis from the consumption of milk derived from tuberculous cows is stated to be in full accord with the conclusion arrived at by the Paris Congress; whilst as regards tuberculous meat, the opinion is strongly held that no animal presenting even the most localised tubercular lesions can be held free from liability to have its blood or flesh generally infected. The results of an inquiry made at Baden-Baden demonstrated the prevalence of tubercular disease in districts where there was proved to be a large consumption of cheap (and tuberculous) meat. The question of stringent regulation of food-supply and the adoption of cleanly habits is illustrated by the alleged immunity of Jews from these diseases. This immunity amongst the stricter members of the community who faithfully observe the ordinances of their religion in respect to these matters is apparently a fact; but amongst the poorer class, who are unable from their surroundings to observe these rules of life, or are indifferent to them, the mortality from tubercular disease is practically the same as that among the rest of the population. This clearly appears from certain statistics gathered from the London hospitals, and accords with the author's experience amongst hospital patients.

In our opinion too scant consideration is given to the other factors in the etiology of consumption than those pointing to infection; but the author is himself so thorough-going a believer in the latter doctrine that to him all other alleged causes necessarily occupy a subordinate position. Thus he dismisses as an "eccentric creed" the pure and simple inheritance of consumption; but is fain to concede something to hereditary predisposition, although somewhat grudgingly. Indeed, he thinks that even as predisposing to the disease the doctrine of heredity has been pushed too far, and that its value is greatly curtailed by the infective theory, which admits a liability to the predisposed and non-predisposed alike. His suggestion that assurance companies should test the question of heredity from their statistics has been anticipated by Dr. Reginald Thompson, to whose work on Family Phthisis the author does not refer. He does not seem to have fairly grappled with this all-important subject of heredity. So that to the question why is it that tubercular disease is not even more prevalent than it is, he suggests (for he can hardly be said to adopt) a certain inherited or acquired immunity from infection, or a possible protective influence of a previous attack. He mentions, but without explaining, what may be considered from his standpoint, the exceptional immunity of the nurses and attendants in certain hospitals for consumption, which contrasts so markedly with the no less exceptional prevalence of the disease amongst the Catholic nursing orders of Prussia. The main point on which we should feel inclined to differ from him is as to the question of predisposition or tendency, whether inherited or acquired. In his zeal to establish the claims of the parasite, he seems to us to have too much ignored the importance of the soil; and the argument derived from the freedom from leprosy of the descendants of lepers (and especially the history of Scandinavians in America) who are removed from the infected centres, is just as applicable to the view that environment has much to do with immunity as that heredity has little to do with liability.

His general practical conclusions, founded on the conception that all tubercular disease is infective, and capable only of transmission through infection—that is to say by the transference of the bacillus from sick to healthy, either immediate or mediate—are therefore those which embrace prophylaxis, carried out within reasonable bounds and according to the dictates of humanity. No one would wish in this revival of an old theory to see reintroduced the harsh measures of isolation which had much to do with the banishment of leprosy in Europe, and which were long applied to consumption in Italy. But every reasonable precaution, such as cleanliness of rooms and clothing, attention to the disposal and disinfection of sputa, and a thorough inspection of meat, regulation of milk-supply, and the insistance on proper cooking and boiling of these articles of diet, might, if generally adopted, go far to diminish the mortality from tubercular diseases. There is no particular hardship or trouble involved in the enforcement of such regulations, which are practically the same as those arrived at in 1882 by the Paris Congress, and endorsed to a certain degree, and after prolonged debate, by the Paris Academy of Medicine. But to ensure their adequate performance would require the united efforts of the medical profession and of the community at large, as well as the frank recognition by the patient himself of his being a possible focus of infection. Dr. Heron is sanguine enough to believe that by strict adoption of such prophylactic measures tuberculosis will be banished from medicine to the same extent as sepsis has, through Lister's work, been banished from surgery. We would fain hope that this is near the truth, and in view of the absolute impossibility of proving a negative in regard to the doctrine that tuberculosis is only transmitted in one way—by infection—we for our part would rejoice to see the adoption of measures which, in the light of that teaching, seem reasonable and likely to be effective. But at the same time it would be worse than folly to neglect all other means of sanitation and the like, which, without directly bearing on the question of communicability, must have great influence in raising the general standard of health, and perhaps in indirectly enabling individuals to resist the inroads of the tubercular microbe.

Analytical Records.

PALATINOIDS: A NEW TASTELESS FORM OF ADMINISTERING NAUSEOUS DRUGS.

(OPPENHEIMER BROS. AND CO., 1 AND 3, SUN-STREET, FINSBURY-SQUARE, E.C.)

WE are bound to admit at once the great excellence and elegance of this new method which has recently been introduced to the notice of the profession by Messrs. Oppenheimer Bros. and Co., of Finsbury-square. The drugs in this form are very appropriately distinguished by the name of "Palatinoids," inasmuch as by this means is rendered neutral to the most fastidious of palates any objectionable taste that may happen to characterise the medicament employed. The profession generally will not be slow to recognise the very obvious advantages which a preparation of this kind must offer. It suffices to mention that in the palatinoid such obnoxious drugs as the valerianates, rhubarb, iodoform, quinine, &c., may be administered in a perfectly tasteless yet convenient form; and in the event of administering such medicaments to children, who have, as a rule, the strongest objection to swallow anything that is not pleasing to the palate, this form must prove a veritable boon. For such remedies, again, as the salts of iron, which discolour the teeth when administered in the condition of a liquid, and which are rendered comparatively insoluble when massed into pills and various excipients that not improbably promote the oxidation of the salt, nothing better could be well devised, as the palatinoids remove all these objections. The palatinoids of Messrs. Oppenheimer Brothers exhibit great ingenuity in their construction. Each consists of what may be regarded as two tiny watch glasses cemented together edge to edge. The material, from our own experimental observations, is perfectly pure gum and sugar as transparent as glass, such as is used in the manufacture of jujubes. It contains absolutely nothing of a deleterious character. The average weight of this gelatine envelope is 1·03 grain. The depth of the palatinoids in the middle varies from $\frac{1}{16}$ to $\frac{3}{16}$ of an inch. The diameter is very nearly the same in all—viz., $\frac{5}{16}$ inch, so that they go easily into a glass tube of $\frac{3}{8}$ inch calibre. Such a tube, four inches and a half long, will hold twenty-four palatinoids, each containing from a quarter of a grain to four grains, as the case may require. Twelve of these tubes will lie in a case five inches wide, six inches and a half long, and half an inch deep. Hence in an ordinary pocket the practitioner may carry with ease, in an elegant, convenient, and tasteless form, a very large supply of drugs. The drug is contained in the palatinoid in the state of loose powder—a condition which is calculated to ensure speedy absorption. In lukewarm water they slowly swell, and in three or four minutes the edges gradually part and permit of the passage of the solvent into the interior, which is no sooner accomplished than the contents commence to diffuse out. The saliva acts similarly, although in this case it may be noted that after fully three minutes the palatinoid suddenly and completely dissolves. Previously to the dissolution of the envelope not the least taste is experienced on the palate, except a sweetish taste like glycerine, which is no doubt used as a vehicle in the preparation of the palatinoids. They are slippery in the mouth, and no special effort is required to dissolve them. Indeed, the assistance of a draught of water will with many be quite unnecessary. We have had submitted to us two cases, containing medicaments, a list of which is given in the table below. We have carefully checked the weights of the drugs in many of the palatinoids, and some of those which permit of it have been quantitatively analysed, whilst others have been tested with the view of determining the quality of the contents. The results which are embodied in the annexed table are extremely satisfactory, and they indicate clearly the great care which must have been taken to secure the proper quantity of the medicament in each palatinoid. What is equally necessary, the quality of the drugs in every case leaves nothing to be desired.

Description.	Weight of Contents found in each Palatinoid.	Quantity found on Analysis.	Qualitative Notes.
Caffeine pur., gr. 1.	1·03 gr.	Contents perfectly pure caffeine.	Entirely soluble in chloroform, gave beautiful purple reaction with chlorine and ammonia.
Caffeine hydrobrom., gr. 1.	1·04 gr.	Caffeine extracted, 0·86 gr.; equal to hydrobrom. 1·20 gr.	Beautiful reaction with chlorine and ammonia.
Morph. hydrochlor., gr. ¼.	0·95 gr.	Morphia extracted, 0·12 gr.; equal to hydrobrom. 0·247 gr.	Gave excellent tests with perchloride of iron, iodic acid, and Frohde's reagent.
Sodii bicarb., gr. 2.	1·90 gr.	1·89 gr.	—
Hydrarg. c. creta, gr. 2.	2·03 gr.	Mercury, 0·70 gr.	—
Ferrum redactum, gr. 2.	2·02 gr.	Pure.	Gave hydrogen with acids. Readily attracted by magnet.
Ferri sulph. ex., gr. 1.	0·97 gr.	Fe SO_4H_2O, 0·32 gr.	—
Pepsin porci, gr. 1.	1·00 gr.	—	Readily digested white of egg.
Papain, gr. 1.	1·08 gr.	—	Digested white of egg.
Iridin. c. pepsin, aa gr. ½.	1·04 gr.	—	Readily digested white of egg.
Pulv. opii, gr. 1.	1·04 gr.	—	Morphia easily extracted, giving the well-known tests.
Caffeine valer., gr. 1.	1·00 gr.	—	Caffeine was readily extracted.
Thymol, gr. 1.	1·00 gr.	—	Beautifully white and crystalline.
Exalgine, gr. 1.	0·99 gr.	—	White and crystalline.
Phenacetin, gr. 1.	1·03 gr.	—	—
Salol, gr. 1.	1·04 gr.	—	Characteristic smell when heated.
Pulv. ipecac. co., gr. 2.	1·92 gr.	—	—
Jalapin, gr. 1.	0·96 gr.	—	—

WARRINGTON CHLOROFORM.

(ALFRED H. MASON, 46, JEWIN-STREET, E.C.)

Chloroform ($CHCl_3$), it is generally known, is obtained from alcohol by chlorination with bleaching powder. The theory of the action which takes place is that the alcohol (C_2H_6O) is first reduced to aldehyde by the chlorine, which abstracts two atoms of hydrogen: $C_2H_6O+Cl_2=C_2H_4O+2HCl$. Excess of chlorine then acts upon the aldehyde to produce tri-chlor-aldehyde, or chloral (C_2HCl_3O), three atoms of hydrogen being replaced by three atoms of chlorine. Finally, the chloral with lime yields chloroform and calcium formate. The chloroform is separated by distillation. So obtained it is not surprising to find that the commercial product is frequently contaminated with aldehyde, alcohol, chlorinated oils, chlorine, and hydrocarbons. Warrington chloroform is interesting, inasmuch as it is obtained, not from alcohol, but from an allied body—acetone,—although the action of chlorine in the process may be taken to be similar. Acetate of lime is distilled at a high temperature. Acetone and carbonate of lime are obtained: $Ca(C_2H_3O_2)_2=CaCO_3+C_3H_6O$. Acetone is aldehyde *plus* CH_2. Chlorination by means of bleaching powder then oxidises the CH_2 into CO_2 and water, and converts the residual aldehyde into chloral, which with lime yields chloroform and calcium formate as in the older method. The character of the product may be gathered from our analytical observations, which are as follows: Boiling point, 61·5° C.; specific gravity, 1·5008. One hundred cubic centimetres evaporated to dryness gave no residue. To test paper it was quite neutral. Silver nitrate, no result. Caustic soda, no reaction. Strong sulphuric acid, no darkening, and alcohol was absent, as evidenced by the iodoform test. These results are eminently satisfactory, and testify to the great purity of the sample, a point which is of the utmost importance to those who are concerned in the administration of this anæsthetic.

SALVINE DENTIFRICE IN TUBES.

(SALVINE DENTIFRICE CO., 3, OXFORD-STREET, W.)

Salvine dentifrice is a crimson-coloured, delicately scented paste, which exhibits an alkaline reaction to test paper. According to our tests, it consists of finely prepared chalk, boracic acid, starch, and another ingredient, probably areca nut. It is perfectly free from injurious elements. From its composition it is evidently antacid, astringent, and anti-parasitic. Salvine is contained in collapsible tubes, the use of which offers obvious advantages.

LIFE ASSURANCE AND THE MEDICAL PROFESSION.

THE correspondence which continues to reach us on this subject abundantly shows that the want, to which we have given expression, of better means of information and improved facilities in connexion with life assurance, is strongly felt throughout the profession, and the publication of our Special Supplement can only be looked upon as a first step towards the meeting of this want. The rest will follow, as we hope, in due course. But, in the meantime, it may be well to make perfectly clear one or two points which appear to have been somewhat misapprehended. And first with reference to the not unimportant matter of securing the benefit of the Agency Commission. The argument which we put forward on this subject has been either expressly or tacitly admitted on every hand to be unanswerable, and the only attempted reply has been to the effect that if medical practitioners are entitled to commission on their own premiums anybody else who chooses to ask for it is similarly entitled; and it is said, what then is to become of the insurance agent, who benefits by the commission on his customers' premiums? The answer is that the agent must be content with commission on the premiums which pass through his hands. People who are able to dispense with his services ought to be entitled to save his fees. If he suffers from the direct dealings of his principals with one another, he only shares the fate of some other and not less estimable middlemen. But the practical answer is more conclusive still: *some of the very best Offices have conceded the point*, and the rest must follow suit. A proposer who makes choice of the Equitable Society, the Metropolitan Life Office, the Hand-in-Hand, the Pelican, the University, and some others that might be named, need not be much concerned as to what the other Life Offices will or will not do. But, in point of fact, it will be found that most if not all of them will privately concede the point, even though they shrink from publicly announcing their intention so to do. It requires no great discernment to read this admission between the lines of many of the communications made to us, which were not explicit enough to afford material for our list of commission-free Offices.

From one or two of our official correspondents we have received further communications. The secretary of the Norwich Union Life Insurance Society writes that, although the managers of his Company could not see their way to make any special tender applicable to the medical profession at this stage, they quite agree that it is desirable to form a medical committee, and that if that be done the officers of his company will be pleased to communicate with that body and endeavour to meet their requirements in any way in which they could fairly do so. The secretary of the Imperial Life Office desires us to publish the subjoined passage, which was cut out at the last moment, with several other passages in different parts of the Supplement, in order to bring our matter within the limits of our space. He also says that his Company is the only one which has a scheme of temporary assurance of long duration exceeding fifteen years. To the importance of this form of the assurance contract we have sufficiently called attention. Again, the secretary of the City of Glasgow Life Assurance Company points out that his society has a table under which assurance is granted at reduced premium rates during the early years of the contract. This table escaped notice in the preparation of our Table of Extracts from the prospectuses sent to us, and we are happy now to supply the defect. But the secretary of the Scottish Accident Insurance Company has a more serious grievance still, for it seems that his communication has been suppressed altogether. And here we cannot even make amends; for as no notice of his Company can be found among our papers we judge that it must have miscarried in the post.

Extract referred to above.

The primary object of life insurance is to furnish an indemnity against the death of the bread winner during the working years when he is accumulating a competence or a fortune. The Company (Imperial) offers a scheme of indemnity insurance designed to secure at the lowest cost the largest possible amount of assurance during the working years of life, until the attainment of an age selected by the proposer, when the insurance ceases. Thus, at age thirty, an annual premium of £12 13*s.* 4*d.* will secure the payment of £1000 if death occur before the age of fifty. For a similar assurance of £1000 to continue until the age of sixty the annual premium is £15 0*s.* 10*d.* An entrance fee of £11 per £1000 is chargeable for the first year only. The usual systems of assurance common to all Offices are also granted—e.g., ordinary whole life at uniform premiums; ordinary whole of life at limited payments; endowment assurances, with profits for old age or death.

SUICIDE OF A SURGEON AT LEEDS.—An inquest was held last week by the borough coroner on the body of Mr. John Long, M.R.C.S., of Ripley Lodge, Wortley-road, Leeds, which was found on the previous Tuesday in a summer house adjoining his residence. Mr. H. Waite, a resident surgeon, who had attended the deceased for some time, deposed that Mr. Long had been in a very low feeble state of health, and would utter forebodings as to his death, but Mr. Waite discovered nothing to indicate a suicidal tendency. A verdict of suicide whilst of unsound mind was returned.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 29, 1890.

THE coincidence of the opening of Parliament and the meeting of the General Medical Council upon the same day was referred to in our issue of last week. To-day the President's address comes under notice, and on attempting to compare it with the formalities of the Queen's Speech the greater part of the analogy ends. Both, of course, appear to take a somewhat roseate view of the amount of work which will be performed during the session; both indicate the general lines along which the work will proceed; but the President's addresses of past years furnish a much more accurate summary of what has been done than could ever be deduced from the Queen's Speeches. The session of the General Medical Council rarely furnishes startling surprises. Even the tedious deviations, which so frequently mar its progress, usually have a strong family likeness to each other. When once the President's address has been delivered it remains merely to see how much of the work he has therein outlined will be completed; no great novelty is to be expected if it has not been foreshadowed in the address.

On Tuesday last the address seemed somewhat shorter than usual, but the topics touched upon covered a wide range. The tribute to the memory of Dr. MATTHEWS DUNCAN, who had occupied a seat on the Council for five years, was gracefully made at the opening of the address, the reference to his "characteristic decision of opinion and action," and to his "kindly disposition," being peculiarly appropriate.

Of foreign affairs the only two mentioned as interesting to the Council were the granting of access to the Colonial Register to graduates of the University of Sydney, in New South Wales, and the absence of any negotiations with foreign powers for the reciprocal registration of medical degrees. The correction of the Medical Register for 1891, and its importance, in view of the ensuing election, of direct representation, was briefly touched upon, and the "ingenious proposals" of Surgeon-Major EVATT for the improvement of the Medical Register were practically declined by the Executive Committee with complimentary thanks. Several applications having been made for registration in the Dentists' Register under special conditions, the President has urged the Executive Committee to recommend the discontinuance of these exemptions, which have been in force for nearly thirteen years.

It is to be regretted that there are several cases requiring investigation as to alleged misconduct of various kinds, which inquiries always necessarily and very properly consume an immense amount of time. Many necessary questions connected with education and examination will probably be postponed to the meeting next May, but some conclusion is likely to be arrived at concerning the number of attendances upon cases of labour. From the President's statements it would seem that this question is at present determined by each examining body, and that the number ranges from six to thirty, the most frequent number being twenty-four. Some brief clause to ensure greater uniformity is doubtless expedient. With extreme caution the mode of splitting up the final examination was approached, the legality of which has been determined by the medical advisers of the Council. Avoiding controversial topics as much as possible, the President appeared to be in favour of such subdivision, provided that the partial and the completed examinations were held and passed within certain prescribed limits of time. The registration of the Glasgow diplomas in Sanitary Science must come under discussion, and it is to be hoped that the stigma incurred by the hasty examination in October, 1889, may now be removed. While reminding the Council of its powers of visitation and inspection of examinations, the President deprecated hampering the action of the qualifying bodies while studying the various aspects of the proposed curriculum of five years. His hope for better and more harmonious results seems, perhaps, rather too sanguine, but upon this it is premature to speak before the results are known. Brief references to the work of the Pharmacopœia Committee and to the registration of educated midwives led up to the final and perhaps most important question of all—the increase of the number of direct representatives upon the Council. The President feels that, for the present at least, the Council is quite large enough, and, although he leaves this question for discussion by the Council, he remarks somewhat significantly that it must be decided by an authority outside of and superior to the General Medical Council. In other words, the matter is one upon which argument and time may be expended, although no immediate result is to be anticipated.

THAT intense excitement is invariably followed by a corresponding depression was never more clearly brought out than in the events of the last few weeks, and the unreasoning, because too excited and too sudden, jubilation of the medical world has been followed, or is being followed, by an equally irrational reaction which has taken the form of everything that can be urged, either probable or improbable, against KOCH in the first instance, and against his new method in the second. Statements that KOCH never made are vigorously contradicted, and results which he never claimed are as forcibly denied. All this is to be greatly deplored, as either exultation or depression of a hysterical nature in the medical profession must necessarily be reflected in an intensified form in the minds of those poor patients suffering from tuberculous affections, the hopes of many of whom have only been raised to be unnecessarily shattered.

We were assured at first that tuberculosis was about to become a disease of the past, that KOCH'S new method was to annihilate the tubercle bacillus; whilst now we are assured that KOCH has done nothing new, and that he is simply working out PASTEUR'S ideas. Let us discuss calmly the present position of affairs. KOCH, like all scientific men, has his own methods of working, and his own system of declaring his results. He

has never yet rushed into print with a discovery until he has been sure of his facts, and all who are in any way acquainted with the circumstances under which KOCH was practically compelled by his Government superiors and by his colleagues to make his premature statement at the International Medical Congress in Berlin will sympathise most deeply with him that he was compelled to break through his usual reticence. As we have already pointed out, it is evident from the carefully written statement that he made on Nov. 14th that even this was wrung from him by his desire to counteract in some measure the effects of the indiscreet ardour of his friends and disciples, and to correct the misleading statements that have from time to time appeared in the press, and so to lay before his medical *confrères* his exact position in regard to his new discovery, and to correct some of the erroneous impressions that were gradually gaining ground, not only amongst those who had charge of phthisical patients, but amongst phthisical patients themselves.

KOCH has made a most marvellous discovery—one which in many respects is on absolutely new lines; but, with the modesty which should characterise all scientific workers, he distinctly warns those suffering from phthisis that they must not raise to too high a pitch their hopes of being benefited by it; for, although he states very clearly and very distinctly his belief that he has been able to obtain a material which, when injected into the human subject, brings about the disintegration or degeneration of any tissue that forms a nidus for tubercle bacilli, neither he nor any other can restore the normal tissue that is lost; he can localise the diseased patches, but he cannot restore them to life. This new method of treatment depends not upon the fact that the patients become accustomed to the action of the poison produced by the tubercle bacillus (though this also seems to be effected), but rather to the fact that the diseased area is so sharply defined by the reaction set up on the introduction of the lymph that the tuberculous area practically becomes encapsuled. Bacilli are confined to this area, and the whole mass may be removed. The era of surgical interference with tuberculous masses may be said to have dawned should it be found on further experience that the separation of the dead from the living tissues is as distinctly brought about as KOCH seems to have proved.

Let us see how far KOCH really goes, and how far ordinary pathological explanation may be brought in to support his position. As regards lupus, he has not the slightest doubt as to the ultimate success of his treatment. After weekly injections for three or four weeks of full doses of the lymph at some distance from the ulcerating surface (usually in the back), the disease is practically cured, and cicatrisation takes place, even in cases where the disease has been of several years' standing. The local changes that are set up point to the fact that the lymph acts immediately on the tubercular granulation tissue of which the surface of the ulcer is composed. The lupus spots begin to swell and to redden, showing that there is an increase of fluid in the bloodvessels, and probably also in the lymph spaces. This commences before the rigor, which is a characteristic feature in tubercular cases, sets in. During the fever that follows, the swelling and redness increase, and finally may become so marked that small brownish sloughs are formed as a result of the intense reaction, the tissues apparently dying before the eyes of the observer. In those cases where the lupus is sharply defined the central portion corresponding to the tubercular granulation tissue becomes swollen and brownish, eventually undergoing necrotic changes; surrounding this centre is a whitish rim almost a centimetre wide, the exact nature of which is not evident, though one would expect to find that it consists of an œdematous fibrous tissue area; whilst outside, again, is a broad band of bright-red inflammatory tissue (corresponding to the old hyperæmic zone), in which there appears to be, from all accounts as yet received, an attempt made by the healthy tissues to still further localise the mischief. Should a similar series of changes take place in the tubercular areas of bones and joints, the question of operation, after the injection of the lymph has done its work, will of course be settled, and the same will apply to glands or other tuberculous tissues that are accessible to the surgeon's knife. Indeed, in the present condition of cranial and abdominal surgery there can be almost no limit to the cases in which surgical interference may become applicable and necessary; even in the lung, as has been pointed out by eminent surgeons, it will not be a very difficult matter to remove a localised mass of tubercle, or even a series of masses, when drainage of tuberculous cavities would be out of the question; whilst the treatment of tubercular empyæma will be much shortened and very considerably simplified.

All thoughtful physicians will be inclined to take a more hopeful view of KOCH'S treatment from the fact that he does not disdain to call in the aid of those means which physicians up to the present have found to be most beneficial in the treatment of phthisical patients; fresh air, good nursing, and good food being all brought freely into requisition where possible. He claims for his lymph only the power of killing the weakened tissue, so removing the pabulum on which the tubercle bacilli depend for their existence, and he aims at so far strengthening the tissues of the body that they can withstand the attacks of bacilli that are driven out from the tuberculous areas by reason of scarcity of food.

There is one point to be borne in mind in all this. KOCH formerly insisted that the reason no tubercle bacilli can, in many cases, be demonstrated in caseous areas, is, that as soon as the conditions have become somewhat unfavourable to the existence of the bacilli, spores are formed, and these, remaining in the caseous mass, may prove a fruitful source of infection for long periods after the bacilli have disappeared. It is for this reason that the danger of removing tuberculous masses by scraping and cutting has been insisted upon. If this danger be present, there will, in KOCH'S treatment, be two difficulties, which, doubtless, in time, will be removed, but which, at present, are deserving of careful attention. It will be necessary to make sure that the processes of necrosis and localisation are complete, and the greatest care will have to be exercised, in the removal of these necrosed masses, not to disturb the sequestrum in any way, and, so far as can be seen at present, "free but careful incision" will have to be the rule in dealing with them. Whether the thermo-cautery may not also come into greater requisition is a legitimate matter for speculation,

It would be idle, with the data at our disposal, to attempt to discuss the nature of the lymph; but, from the fact that the local and constitutional reactions are not set up in other cases where we have granulation tissue somewhat similar to tuberculous tissues—as in syphilis, for example,—we must assume that the lymph does not necessarily act on all tissues of low vitality, and we are forced to the conclusion that KOCH'S lymph acts in conjunction with the products of tubercle bacilli in bringing about the rapid disintegration of the cells amongst which the tubercle bacilli lie, and that it compels, as it were, the activity of the tubercle poison to be exerted at once, and does not allow of its being transferred by lymphatic or other channels to tissues, even to those in the immediate neighbourhood of the "sequestrum." It also assists in setting up the rapid local reactionary changes in the surrounding tissues, so bringing a sufficient number of active cells and fluids to deal with any bacilli that may escape, or with any poisons that have not been compelled to act in the caseating area. All this points to the fact that KOCH is dealing with a soluble poison very similar in its nature (though perhaps modified) to that set free by the tubercle bacillus itself.

We shall, of course, shortly have more information. It behoves us, however, in the meantime, to keep an open mind and to confine our attention to KOCH'S own observations, and not accept either the statements of enthusiastic disciples, who are apt in their ardour to raise false hopes in those in whom the "spes phthisica" is only too readily excited, or of those who have a constitutional prejudice against anything that they do not fully understand. KOCH holds out hopes of the cure of lupus, which he thinks will not recur; of tuberculous glands; of tuberculous joints; and of early phthisis where there is only slight cavity formation; even of laryngeal phthisis; of cases of tubercular meningitis; and of tuberculous disease of others of the serous membranes; but we cannot be astonished that he despairs of being able to effect permanent cures in cases where there are large cavities in the lungs, or where secondary suppurative changes are helping in the disorganisation of the lung or other tissues. It is remarkable that the general or constitutional symptoms caused by the injection of the lymph are almost identical in character with those met with during the process of abscess formation: pain in the limbs; fatigue; inclination to cough, and difficulty in breathing, speedily followed by rigor, which lasts for some hours; sickness; vomiting; and a rise of temperature to 39·6° C.; then a fall of temperature, weakness, and lassitude, and later a return to the original condition. It would appear as though local changes in which death of the tissues takes place gave rise to these symptoms, just as in the process of localised suppuration where rapid death of the tissues takes place. The other local conditions are exactly the same as in acute suppuration, but the ultimate results, as we have seen, differ in a very marked degree. It is somewhat difficult to understand why the discharge from the lungs should return to a mucous condition, except in cases where the tuberculous infiltration has been exceedingly slight; but these probably are the cases to which KOCH refers in his reports, as these are the cases which, certainly, are most suitable for treatment. If he is able to make good even a fraction of the promises that he has made, he must be looked upon as one of the greatest benefactors of suffering humanity that the world has seen.

A PREVALENCE of epidemic pneumonia in the neighbourhood of Scotter in Lincolnshire has been the subject of an exhaustive report by Dr. PARSONS of the Local Government Board,[1] its peculiarities and exceptional character having made it desirable that all details likely to assist in an explanation of the circumstances should be recorded. The disease attracted attention early in April last, and the doubt as to its cause was made the more prominent because Mr. FRANKLIN EMINSON of Scotter and Mr. H. WRIGHT, the local health officer, differed on the point. The death certificates also tended to obscure the question at issue, because Mr. EMINSON, senior, who himself fell a victim to the disease, was in the habit, in the case of aged patients, to content himself with a certificate of "old age," whereas it is stated that in the cases he attended he distinctly recognised the specific character of the disease, which he styled "typhoid pneumonia." In all some twenty-nine cases were observed, but these leave out of view a number of mild attacks accompanied with diarrhœa, which appear to have had some association with the epidemic; and they also include some acute cases the nature of which is not free from doubt. There was sudden invasion, with rigor, at times diarrhœa, pain in the chest or region of the liver, headache, faintness, prostration, and at times drowsiness. Then high fever developed, the temperature curve being irregular; inflammatory mischief in the lungs was obvious; there was cough, difficulty of breathing, tinged sputa, delirium, bleeding from the nose, and gastro-intestinal symptoms. These characteristics are minutely set out by Dr. PARSONS, and they are supplemented by a detailed account of the cases, largely from the pen of Mr. FRANKLIN EMINSON. In one or two cases relapse occurred, this being associated with pneumonic mischief of the other lung. The fatality was very great, eighteen out of twenty-nine dying, the mortality being at the rate of 62 per cent. This is much in excess of that recorded by Dr. BALLARD in the Middlesbrough epidemic, but at Scotter the proportion of attacks at an advanced age was greater than at Middlesbrough. With a view of testing the specificity of the complaint, mice were fed with bread soaked in the sputa of the sick, and when the sputa were taken at about the fourth day of the disease the result was almost invariably fatal. The bodies of such mice were sent to Dr. KLEIN for examination, and he obtained from the lungs in pure culture a bacillus identical with that found in the Middlesbrough cases, which were regarded by Dr. BALLARD as cases of "pleuro-pneumonic fever." At Scotter a number of those attacked had been in close relations with the sick, nursing them, washing their linen, or laying out their bodies, and, as already stated, Mr. EMINSON, senior, who attended a number of the first cases, also sickened and died of the disease. But at the same time, multiple attacks in the same house were rare, if typical cases of the disease are

[1] Eyre and Spottiswoode, East Harding-street, E.C.; Adam and Charles Black, Edinburgh; Hodges, Figgis, and Co., Dublin; price 9d.

alone considered; indeed, only one such instance occurred out of 28 households. Of the 29 cases, 16 were over fifty-five years of age, no less than 7 being in patients over seventy-five years of age. The period of incubation, when any such could be made out, appeared to be very short, varying from a few to forty-eight hours, but the essential cause of the disease is definitely regarded as a bacillus not distinguishable from that of the Middlesbrough epidemic.

How this bacillus effected its entrance into the human system raises the whole question of the etiology of the disease. The medical officer of health was inclined to ascribe the disease to inclement and variable weather, and then to direct infection from person to person. On the other hand, Mr. FRANKLIN EMINSON looked upon the disease as but slightly infectious, and considered that it was mainly propagated through the medium of infected sewers and incidental pollution of air and soil. Much hinges in this respect on the question whether the major attacks are alone to be taken into account, or whether a number of minor ailments amongst children, largely associated with diarrhœa, which occurred in the spring of the year, are also to be considered as forming part of the prevalence. It is certain that water, milk, and food may be eliminated as causes of the disease, but defects in sewerage seemed to bear some relation to a number of the attacks. The essential sewer defect, however, had to do with the ventilators; and although in Scotter the distribution of the disease was chiefly along the course of one particular sewer which might have been specifically fouled, yet a map appended to Dr. PARSONS' report shows that the houses in which pneumonia occurred were not, as a rule, those nearest to the offending street gullies. And, again, the disease was not confined to Scotter. Other cases, in addition to those referred to, took place at Scotton and at Messingham, where the circumstances of the outbreaks do not accord with the view of a sewer infection. At the same time, Dr. PARSONS is inclined to regard the Scotter sewers as having probably served as a channel for conveying the infection, as, indeed, was also the presumption at Middlesbrough; but he regards direct infection as having played a greater part in the spread than was suspected by some in the locality. But Dr. PARSONS adds that such a view does not explain all the facts, and he evidently thinks some other agency, the nature of which is perhaps unsuspected, is required to account for the propagation of this disease. The truth is that pleuro-pneumonic fever has, as yet, been but little studied either clinically or etiologically, and we are very much in the dark as to its meaning and as to the causes which produce it and assist in its diffusion. Almost the only exhaustive reports on the subject are that by Dr. BALLARD on the Middlesbrough prevalence, and this one by Dr. PARSONS on the Scotter outbreak; and we feel certain that if other similar occurrences are studied and recorded in the same detailed manner, it will not be long before etiological points are cleared up that are now obscure. In the Scotter case the loss of Mr. EMINSON, senior, deprived the investigators of a number of facts that might have been of value in this connexion; but his illness afforded, in his own opinion, a proof of the infective character of the disease; for he put down his own attack to his attendance on a patient in whose case there was profuse diarrhœa, and who lay in a close room where the atmosphere was such as to cause considerable nausea. Mr. EMINSON sickened the day after visiting this case. In the later stages of the general outbreak the action taken had reference to the possible infective character of the attacks, and the preventive measures adopted may have had a distinct influence in further restraining the contagious quality of the malady, whether within the same household or beyond such limits. For the moment our attitude must be one of expectancy and of watchfulness, in order that there should be no failure to recognise similar prevalences, whether on a large or a small scale, and to ensure that they may at once be investigated with the minuteness and care which they so obviously demand.

A DISCUSSION of some interest took place recently at a meeting of the American Neurological Association in reference to a case read by Dr. C. L. DANA. The patient was a woman who had come to hospital in a stupid condition suggestive of intoxication, and from whom no history could be obtained. Careful examination elicited the fact that on the left side there were analgesia and slight motor weakness, while the right pupil was contracted. She had a pulse of high tension. Next day she was clearer mentally, but the hemiplegic condition was now well established, and the analgesia remained as before. Towards evening she became more stupid, finally comatose, and she died with a high temperature. At the necropsy the brain was found to be congested, and there was a feeling of fluctuation under the supra-marginal convolution. On section a clot was found in the lateral ventricle, there was blood in the third ventricle, and underneath the supra-marginal convolution a hæmorrhagic focus existed, which extended downwards and forwards, and from which blood had been effused into the lateral ventricle.

In the discussion which followed the reading of the case the question of operative procedure was considered, and trephining was suggested. The purpose for which such a mode of procedure was recommended was, if possible, to get at the bleeding point and secure it; but it is evident that to do this many difficulties would have to be overcome. In the first place, no sufficient indication of the locality of the bleeding point was present; and even if it had been, the inroad into brain tissue which would have been necessary before control of it could be gained would have been very considerable, and, in the condition in which the patient was, not improbably fatal. Again, supposing that slow bleeding was going on, the relief to intra-cranial pressure which would have taken place as soon as a disc of bone was removed from the skull would only have resulted, in all likelihood, in a sudden and severe accession of hæmorrhage.

It is somewhat strange that in such a discussion, the much more radical and effective method of stopping the bleeding by ligature of the common carotid—a course suggested some months ago by Mr. VICTOR HORSLEY and Mr. SPENCER—should not have been mentioned. Those authors showed, by a series of observations on the lower animals, that in them at least ligature of the common carotid effectively controls bleeding in the region of the corpus striatum; and in the

paper detailing the results of their experiments they suggest this procedure in cases of cerebral hæmorrhage. Theoretically such a course is both rational and scientific. The objection to it lies in the practical difficulty which surrounds the diagnosis of the nature of the lesion in cases of hemiplegia. Embolism would be the natural explanation sought in patients who are the subjects of the heart lesions usually associated with this condition, but the differential diagnosis of thrombosis from hæmorrhage, especially in the early stages, when alone operative measures to be successful must be undertaken, is a problem of the greatest difficulty and delicacy; and a mistaken diagnosis, if it led to ligature of the carotid when thrombosis had taken place, or was in process of taking place, in a cerebral vessel, would of course have the most serious consequences. In some cases it is conceivable that the diagnosis may be sufficiently clear to justify operative interference of the kind advocated by Mr. HORSLEY and Mr. SPENCER, and under such circumstances a good result might be hoped for. If this be so, it offers a fair prospect that surgery in the future may be able to deal with a class of cases which, at the best, are but little amenable to treatment by medicine.

Annotations.

"Ne quid nimis."

WELLINGTON BARRACKS AND THE WAR OFFICE.

THE evidence given before the coroner at the inquest upon the two children who were burnt at the fire at Wellington Barracks on Nov. 12th brought out some astounding revelations which are anything but creditable to our War Department. To some of these we think it well to call attention, in the hope that it may lead to the adoption of a better system. The first important point has reference to the construction of the building. Captain Shaw, chief officer of the Fire Brigade, stated that the building was 90 ft. long, 30 ft. wide, and 40 ft. high, with passages through the centre of each floor leading to the rooms on each side. There was but one staircase and no balconies, and a great deal of wood in the structure. The fire commenced on the first floor, and passed up the staircase to the second with great rapidity, thus, of course, cutting off the chief means of exit. The only other outlet was stated by one of the witnesses to be a trapdoor in the roof, which was described as being "twelve feet from the floor, and there was no ladder to it." Through this, thanks to the energy of two non-commissioned officers, twelve women and four children were passed, and ultimately rescued by means of ladders. There appears to have been no fire-escape of any description in the building. But, apart from the defective construction, there seems to have been no provision for extinguishing a fire in case it occurred. One of the witnesses said "he believed that in the early moments of the fire a few buckets of water would have sufficed to subdue the flames." We were under the impression that all our public buildings (including, of course, the barracks) were supplied with fire buckets; but it would seem that the married quarters, in Wellington Barracks at least, had no such provision. But, again, there was a very serious failure in connexion with the water-supply. It appears that the key of the main—on which of course the use of the fire engines depends—was in charge of a labourer employed at the barracks; an arrangement made, we presume, by the barrack department. This he was instructed to keep in his room that it might be handy, but on the alarm of fire "he was so anxious for the safety of his family that he rushed out of the building and forgot the key of the main, which was the only key that would turn on the water." . . . "He did not suppose it was generally known where the key was kept." It is somewhat difficult to understand the connexion between his anxiety for his family and his rushing out of the building, but the arrangement for the custody of the key is certainly peculiar; we should have thought that in a barrack the guard-room would have been the proper place to keep it, as the custodian of it—the sergeant of the guard—must always be at hand. We would suggest to the Barrack Department to take immediate steps for such an arrangement in all their barracks. But, in addition to these defects in construction and arrangements, another very striking circumstance was brought to light. The medical officer-in-charge deposed that he had on several occasions reported on the dangerous character of the building. Colonel Gascoigne, the commanding officer, had, in accordance with the rules of the service, brought this to the notice of the War Office authorities, and had "made the strongest possible report on the subject of the building which was the scene of the fire." So late only as May last he had reported it as having been "often and often condemned. It is quite unfit for human habitation. If a fire occurred there at night there must be many deaths. It is perfectly insanitary, a portion of it being over the cook-house. It admits of no improvement, and should be pulled down." In consequence of this report the Secretary of State made a personal inspection of the building, and we cannot doubt had the grievous defects brought fully to his notice. But with what result? Nothing whatever had been done to remedy the evils or to ensure the safety of the inmates in the event of a fire. We can easily imagine the torrent of indignation which would have fallen on the medical officer if he had neglected to report the state of the married quarters, and on the commanding officer if he had not brought it under the notice of the authorities. But the Secretary of State, having, we presume, made himself acquainted with this very unsatisfactory condition of affairs, placidly allowed it to go on at the imminent risk of many of our soldiers, their wives and children. On whose shoulders will he lay the responsibility?

MICRO-ORGANISMS IN PLEURITIC EFFUSIONS.

IN the *Archiv für Exp. Path. und Pharmakol.* (xxvii., Hefte 4 und 5) E. Levy publishes the results of bacteriological investigations which he has made on fifty-four cases of pleuritic effusion. Plate and tube cultures were made in addition to the ordinary microscopic examinations. Of these fifty-four cases, thirty-seven were serous and seventeen purulent. Six cases occurred in connexion with typhoid fever, of which five were serous and one purulent; nineteen with pneumonia and influenza, ten serous and nine purulent; fourteen cases were tubercular, thirteen serous and one purulent; acute rheumatism and chronic nephritis contributed one case each; three serous effusions occurred with new growths, and four in cardiac disease; whilst six others were from other causes. In three cases of serous effusion in the typhoid cases cultivations gave no results; whilst in the two others the staphylococcus albus was found. In the last named the effusion did not become purulent, but subsided without surgical interference. In the one purulent case in connexion with enteric fever the same micro-organism was found, and the case did well after the pus was withdrawn. Of the serous exudations of the second group—pneumonia &c.,—in three no organism could be discovered, in one the staphylococcus pyogenes albus

alone was present, and in another this organism together with the pneumococcus. In the remaining six cases and in all the purulent effusions the diplococcus was separated. In cultivation experiments with the exudation from the tubercular cases no micro-organisms could be found, but this does not agree with the results published by other authors, in which tubercle bacilli have been found, although the fluid was serous throughout the whole of the case. In four cases of cardiac disease in which the effusion was hæmorrhagic, the staphylococcus pyogenes albus was found. In all the other cases the results were negative. Levy concludes as follows:—1. The great majority of serous-fibrinous pleuritic effusions contain no micro-organisms. 2. The absence of micro-organisms, when the effusion is purulent, points to the probability of the case being a tubercular one. 3. The presence of the staphylococcus pyogenes in serous effusions in no way indicates that it will become purulent. 4. The discovery of Fränkel's pneumococcus in serous effusions in cases of pneumonia, after the crisis has passed, does not make the prognosis more grave, as it does not increase the probability of the occurrence of an empyema.

THE ROYAL COLLEGE OF PHYSICIANS AND PROF. KOCH'S REMEDY.

AT the well-attended special Comitia of the Royal College of Physicians, held on the 21st inst., to consider whether any official steps should be taken with regard to Professor Koch's discovery, the matter was disposed of, after prolonged debate, by the "previous question," which was moved by Dr. Pye-Smith, seconded by Dr. Pollock, being carried by a large majority. No doubt this course has much to justify it, especially at this early period, and it may be, perhaps, admitted that at present it would be inadvisable for the College to send a Commission to Berlin. We can hardly agree, however, that it does not come within the province of the College to investigate such subjects—a view which can scarcely be sustained on calm reflection. The College is no longer a mere academic body, entrusted solely with granting diplomas and the guardianship of medical ethics. In conjunction with the sister College it has founded a pathological institute, wherein it might be supposed every research would be encouraged that bears on the healing art. But no hope was held out that the College would ever take any steps to follow up Professor Koch's investigations, at least in its "official" capacity, although we presume that its inquiries into leprosy and the like are as much official as would be any authorised investigation into the truth of one of the most remarkable declarations of modern times from one who has earned the right to speak with authority. We yield to none in discountenancing the use of "secret remedies" of whatever kind; nor can we think that Professor Koch or his advisers desire that this substance should be regarded in this light. The initiation of competent bacteriologists into his methods (a point on which the College might well have expressed an opinion) seems to us the only way out of a difficulty, which becomes more serious the longer such reserve is maintained. It must not, however, be forgotten that so soon as any disclosure is made there will certainly be a host of inexperienced imitators, with consequent unsatisfactory results. But surely the use of so potent a remedy could never be adopted by any responsible medical man until he had assured himself of the reliability of the source whence it had been derived.

CHRIST'S HOSPITAL.

WITH reference to the reports which have appeared in the daily press of the prevalence of disease at Christ's Hospital, we are informed by Dr. Alder Smith, medical officer to the institution, that there is no serious cause for anxiety, as there has only been a small outbreak of measles at the hospital—viz., fourteen cases out of 750 boys,—and it would seem that the trouble is now at an end. With regard to the fatal case of diphtheria, the facts appear to be as follows:—A boy was admitted into the infirmary of the institution on Nov. 13th with ordinary measles, and went on well until the evening of the 15th, when the temperature suddenly rose. On the morning of the 16th the characteristic cough of croup was noticed, and the patient was immediately isolated in a special ward, two nurses being engaged to attend to him. The consulting physician, Dr. James Andrew, saw the boy at midday, but no membrane was seen at that time. Membrane was first discovered on the morning of the 17th, and after a consultation it was decided that tracheotomy should be performed if necessary. The case very rapidly grew worse; and at 3.30 P.M. the symptoms were so alarming that tracheotomy had to be resorted to. The operation relieved the boy for some hours; but he rapidly succumbed to the diphtheritic poison, and died on the 18th. One other boy, who went home on the 22nd inst., developed a patch of membrane on one tonsil, but the case is reported to be progressing very favourably. Diphtheria has been a very rare disease in this large school, and for the past twenty years only three isolated cases have occurred amongst the boys (none fatal), and those at long intervals. During this term there has been a most unusual number of cases of mild follicular sore-throat; but of course this trouble has not been confined to the inmates of Christ's Hospital.

DEMONSTRATION OF DR. KOCH'S METHOD OF TREATMENT OF TUBERCULOSIS.

AS announced in THE LANCET of last week, Dr. Koch's method of treating tuberculosis will be demonstrated in London by Dr. Heron and Mr. Watson Cheyne. Dr. Heron's demonstrations on medical cases will be given at the City of London Hospital for Diseases of the Chest, Victoria Park, E. The first demonstration will take place on Monday, Dec. 1st, at 8.30 P.M. Mr. Watson Cheyne's demonstrations on surgical cases will commence at King's College Hospital on Wednesday, Dec. 3rd, at 9.30 A.M. As it is desirable to limit the number of visitors, admission will be by ticket. Those who desire to be present at the demonstrations are requested to apply to Mr. Watson Cheyne and to the Secretary of Victoria Park Hospital respectively; the latter should be communicated with at the Offices of the Hospital, 24, Finsbury-circus, E.C.

PURE SALICYLIC ACID.

PROFESSOR DUNSTAN'S researches upon the chemistry of salicylic acid cannot fail to be of interest to the medical profession, even though they do little more than confirm the ideas which have been previously arrived at from other considerations. The artificial acid has been long since assailed chemically and therapeutically by the late Mr. John Williams and by Professor Latham, while more recently its physiological action has been the subject of investigations by Professor Charteris. Mr. Williams discovered two impurities, and suggested that one of them might be cresyl-salicylic acid. The specimens he obtained have been again examined for the purposes of Professor Dunstan's paper, and they have been found to be respectively ortho- and meta-cresotic acid. The curious fact about the first of these impurities is that its admixture with salicylic acid lowers the melting point considerably. Pure salicylic acid melts at 156·8° C., and ortho-cresotic acid melts at 163° C., but equal parts of each acid, crystallized from alcohol, gave crystals melting at 126° C. On employing the lime process for the purification of the ordinary salicylic acid, crystals were obtained which

melted at 151°C., and these proved to be a third variety of hydroxytoluic acid, which it is convenient to name paracresotic acid. Professor Charteris reports that a specimen of this substance exerts a marked toxic action when administered to animals. Professor Dunstan gave details of the various processes he has adopted for purifying the commercial acid. Some of these, although very efficacious, are inconveniently costly, an objection which does not apply to the employment of basic lead acetate or lead carbonate, in presence of alcohol. In conclusion, it was urged that advantage should be taken of the approaching publication of an addendum to the British Pharmacopœia, to include in it a description of "purified" or "pure salicylic acid," which alone should be employed for internal administration. This purified acid should be required to exist in separate well-defined prismatic crystals, melting between 156·5°C. and 157°C. Before the discussion which followed the reading of this paper at the Pharmaceutical Society, Professor Charteris gave details of his experiments with ortho-, meta-, and paracresotic acids, and also offered short descriptions of acidum salicylicum purificatum and sodii salicylas purificata for insertion in the addendum of the B.P. To judge from Professor Attfield's remarks, it appears improbable that a second acid will be introduced, but possible that the various suggestions would receive due notice when another reprint of the Pharmacopœia should be required. During the discussion Mr. Helbing mentioned that paracresotate of soda had been recommended by Professor Demme of Berne as an antipyretic in 8 to 15 grain doses, and in his "Pharmacological Record" he has since published Demme's results at greater length. Assuming the identity of the acid he employed with that separated by Professor Dunstan (the melting point is the same), the supposed toxic action appears to call for further investigation.

THE PARLIAMENTARY SESSION.

IN the Queen's Speech reference was made to the preparation of Bills by the Government, and their introduction if time permitted, for the establishment of District Councils; for amending the law with respect to the compensation payable by employers in cases of injury to persons in their employment; and for consolidating and amending the laws relating to public health. In the House of Commons on Tuesday, Sir H. James, Mr. S. Buxton, and Mr. Reed gave notice of their intention to bring in Bills to amend the legislation with regard to workshops and factories; Mr. Brookfield will introduce a measure to provide for the declaring of substitutes for hops used in beer; and Sir J. Colomb will bring in a Bill to amend the Slaughter-houses (Metropolitan) Act, 1874.

LATERAL CURVATURE IN POTT'S DISEASE OF THE SPINE.

A SYMPTOMATIC nomenclature of disease is attended with one grave practical disadvantage, in that it centres attention too much upon a leading symptom. In no case is this more apparent than when caries of the spine is called "angular curvature of the spine." This name has certainly led to many cases of this disease being overlooked in the early stages before the curvature is present or is marked, and now, it is pointed out that lateral deviation of the spine is not only a frequent sign of spinal caries, but may even be of diagnostic value in the early stages of the disease. In the October number of the *Boston Medical and Surgical Journal* Dr. Robert W. Lovett has published a short paper on this subject. He made accurate measurements of the spine in thirty cases of Pott's disease taken consecutively, and in twenty-nine of them he found an easily appreciable degree of lateral curvature. Rotation of the spine was frequently present, and more often than not the twist was in the opposite direction to that obtaining in scoliosis. That is to say, with a lateral deviation convex on the right side, the rotation of the bodies of the vertebræ would be usually to the left, and of the spines to the right. Dr. Lovett did not meet with this curvature in caries of the cervical spine. He attributes it to the spasmodic contraction of the spinal muscles, excited to irregular action by the irritation of the nerve trunks passing through the intervertebral foramina, or more probably, of origin similar to that in the muscles acting upon joints the seat of tubercular arthritis. In late stages of the disease lateral distortion may be caused by asymmetrical destruction of the bone. But in the early cases Dr. Lovett was able to correct the deformity by rest and extension of the spine. We may hesitate to accept these conclusions as final, but it is evidently a point that should be cleared up, and the disease is so common that there ought to be no difficulty in obtaining corroboration or correction of Dr. Lovett's observations.

MIDWIVES' REGISTRATION BILL.

AT a meeting of the Gynæcological Society held last Wednesday evening there was a large attendance of members. The following Members of Parliament were also present:—Dr. Farquharson, Sir Walter Foster, Mr. Pease, Mr. Pritchard Morgan, and Mr. William Rathbone. Dr. Aveling read a paper on the subject of the Registration of Midwives, in the course of which he brought forward a motion approving of the better education and registration of midwives. This was seconded by Dr. Robert Barnes. Dr. Mansel Moullin moved the direct negative against the Bill now in progress in Parliament, and deprecated all State registration of midwives. Dr. Rentoul seconded the amendment, and pointed out what he considered to be many serious defects in the Bill. He drew attention to the fact that he was earnestly in favour of the increased education of midwives, but was distinctly opposed to all State registration.

THE OUT-PATIENT DEPARTMENT AND PROVIDENT DISPENSARIES AT HALIFAX.

A GOOD deal of interest has been felt of late in Halifax in connexion with the report of a committee which was appointed in January to inquire into the working of the out-patient department, the working of provident dispensaries, and the desirableness of establishing one in Halifax, in which, by arrangement, the out-patients of the Halifax Infirmary might be treated. Certain members of the committee were deputed to visit two towns, Leicester and Sunderland. In the former town there is a large provident dispensary, which has 33,409 members, with twenty medical men, who receive in the aggregate £3425 13*s.* 5*d.*, in varying amounts according to the numbers they attend, or an average of £171. Sunderland is remarkable for having an infirmary without an out-patient department. The managers of the infirmary gave £500 a year to the provident dispensary, on the understanding that the dispensary shall treat such out-patients as are found fit subjects for charitable relief. The deputation from Halifax were assured that this worked well, and greatly checked the evils of an out-patient department. The Halifax committee, after taking evidence, were fully satisfied that 70 per cent. of their out-patients were able to pay either the necessary contributions to a provident dispensary or to remunerate a private medical man in the ordinary way. They were unanimous in recommending: 1st, that a provident dispensary be established as an institution distinct from the infirmary; 2nd, that on its establishment an arrangement be entered into whereby, in consideration of an annual grant from the infirmary, the out-patients of that institution shall be treated at the dispensary. The committee seem to have acted with much method, and to have come to clear conclusions. If they

will take pains to safeguard the dispensary from being used by unfit persons, and to keep up to a proper level remuneration of the medical men, they will introduce a valuable reform which most communities see needs to be effected, but lack the courage or the determination to achieve. If such precautions be not taken, the provident dispensary will be simply the same abuse with another name. £3426, however, is a very inadequate sum for medical attendance on 33,000 people. We assume that there would be an equally clear understanding that cases of exceptional interest or gravity in the dispensary would receive consideration in the hospital. The definite finding of the committee as to the abuse of the out-patient system is very important.

QUACKERY AND COVERING IN BELGIUM.

THE Asiatic quack oculist, Golam Kader, who, as has been already mentioned in THE LANCET, has been driving a brisk trade in Brussels, has at last been summoned before a court of justice for illegally practising the art of healing. Evidence was given that the defendant, on his arrival in Belgium, commenced to practise in good faith, believing his diploma from Singapore sufficient. When his attention was drawn to the questionable legality of his proceedings, he associated with himself Dr. Declercq, who stated that he acted as cover and screen (*servait de couverture et de paravent*) to Golam Kader, that he was unacquainted with the nature of the latter's medicaments, but acted merely as his submissive assistant (*aide docile*) for the purpose of shielding him from the penalties which legislation had rightly or wrongly attached to practices of the kind. Taking into account the good antecedents of Golam Kader, and the fact, as testified by some of his patients, who were produced as witnesses in court, of the cures he had effected, and, believing that he would not continue to offend, the court sentenced him to a fine of only 60 francs or twelve days' imprisonment. Of course, the court had nothing to do with the much more serious offender, the qualified *aide docile*. It is to be supposed that professional opinion will be brought to bear on him, but it does not seem that so adequate a means of dealing with him exists as we have in the General Medical Council, which would assuredly not pass over such a flagrant case if it were brought before them. The continental system of punishing an avowed quack, who has succeeded in enlisting public opinion on his side, does not appear to be free from objection. In the case in point it is stated that Golam Kader received quite an ovation from his sympathisers as he left the court, and the medical profession doubtless comes in for some very hard words.

THE RELATION OF GROUND WATER TO DISEASE.

MR. BALDWIN LATHAM, in his introductory address as President of the Royal Meteorological Society, gave an account of the relation of ground water to disease. There was much in his paper deserving of study, and he is to be congratulated on the painstaking manner in which he has observed the physical conditions of which he gives account; but in discussing the effects of these conditions he appears to have lost sight of other circumstances which must particularly be held to be responsible for the prevalence of disease. As illustration we may refer to his comments upon small-pox prevalence, which he holds is related to dryness of the ground. Small-pox, he says, is almost always preceded by a long period of dryness of the ground, measured by the absence of percolation, and he observes that during the year 1871, which was a very fatal year, there occurred the smallest amount of percolation recorded. Other years are cited when small-pox prevalence was preceded by dryness of soil. In considering this subject, however, regard should be had to other circumstances than ground water; for instance, Mr. Latham takes no account of hospital influence as affecting this question. This condition, it is now fully proved, is all-important, and to attempt to judge of the effect of dryness alone must necessarily lead to untrustworthy results. Temperature, too, has a marked effect upon disease prevalence, and cannot be eliminated from consideration. While fully recognising the value of Mr. Latham's meteorological observations, it is impossible to deny that he has been at considerable disadvantage owing to his dealing with subject matter beyond the scope of his own professional knowledge.

DEFAULT AT KIRKHEATON.

A RULE *nisi* has been granted against the Kirkheaton Local Board of Health, because they have made default as to sewers and drains. The application was made under section 15 of the Public Health Act, 1875, because the Local Government Board refuse to grant inquiry under section 299, which is the usual defaulting clause. But the latter section contains some limitation as to the remedy of default at a reasonable cost; and although this may not primarily apply to sewerage, yet it is stated that the district could not pay for a proper system. Such districts have no right of separate existence, and yet there are numbers of them in Yorkshire which are very similarly circumstanced, and they ought to be reabsorbed into the larger rural areas to which they once belonged.

THE GENERAL HOSPITAL, BIRMINGHAM.

AFTER an existence of over 120 years, the General Hospital of Birmingham, as it now exists, is doomed to extinction. A proposition to build a new hospital has already found much favour, and is being taken up by earnest workers who will see it through to completion. The origin of the movement arose in the legacy of Miss Ryland, who made it a condition, on leaving the sum of £25,000, that it was to be devoted to a new building. The present building and site have been condemned by the medical staff, and although a considerable amount has been spent in sanitary improvements of various kinds, there are defects which are rightly looked upon as irremediable. Already a site has been secured of an appropriate character. Several sums of £5000 have been promised, and, exclusive of the £25,000 named, £70,000 more is wanted to erect a building worthy of the town. A town meeting is to be called at the end of January, when the plans and details will be made known to the public. It is confidently expected that the required sum will be obtained from the urgent and necessary appeal to be made.

DIPHTHERIA AT CROYDON.

FROM a letter which Dr. Alfred Carpenter has addressed to the public press, it would appear that he largely coincides with the view that the epidemic of diphtheria at Croydon has been concerned with drain and sewer effluvia, and that the milk was only secondarily a cause of disease. It is further pointed out that the foul condition of the sewers has mainly been brought about by the defective state of house drains, which ought to have been laid in concrete, but which have not been required to be so constructed. This allegation we can readily understand; for it is no uncommon thing to find a foul state of public sewers altogether due to faulty house drains. If the latter are imperfect, and allow either of stagnation or of the soakage of their contents into the surrounding soil, the resulting foul air necessarily makes its way into the sewers, and these are then complained of by the owners of the offending house drains. Whether this was the actual cause of the Croydon outbreak we are unable to say. But such conditions lead

to sore throat, and it is implied by Dr. Carpenter that the circumstances under which sore-throat in Croydon has prevailed were such as to enable it to spread, or, in other words, to assume an infectious type. This view has often been contended for; and so long as such conditions of drain and sewer obtain in Croydon as Dr. Carpenter has described, it will certainly be impossible for the responsible sanitary authority to say that these conditions are not acting as causes of disease.

A WORD IN SEASON.

IT cannot be too forcibly pointed out that the inquiry set on foot by Professor Koch is still in the experimental stage. That the remedy is very potent has been amply demonstrated, and hence the need for greatest caution in its use, and that it should be entrusted only to thoroughly competent hands. Unfortunately the public excitement in Berlin has been so great that, whether they wished it or not, those to whom Professor Koch has given specimens for the purpose of trial have been practically compelled to employ it largely in private practice. It was doubtless this consideration, as well as the facility given thereby to indiscriminate employment of a remedy, the composition of which is unknown, and the effects of which are still *sub judice*, that weighed with many Fellows of the College of Physicians in arriving at the decision mentioned elsewhere. We consider that at the present stage there should be no employment of the remedy except in public institutions, where every opportunity can be taken for the most careful observation and record, where cases can be selected with discrimination, and where, too, the experimenter will have no temptation to use it for his personal advantage. The reports from Berlin respecting the extent to which use is being made by a few favoured physicians, and the exorbitant fees that are alleged to be charged by them, are, if correct, likely to bring much discredit upon the profession.

THE MATTHEWS DUNCAN MEMORIAL.

AT a meeting held on Thursday, the 20th inst., Principal Geddes in the chair, it was resolved to commemorate in some way the connexion of the late Dr. Matthews Duncan with Aberdeen and his Alma Mater, the Aberdeen University. It was considered that such a memorial should take the form of a bust to be placed in the University, and, if possible, a prize or scholarship in connexion with its medical school. Subscriptions may be forwarded to Mr. W. O. Duncan, Advocate, Aberdeen.

THE RIVER THAMES.

A REPORT has recently been issued to members of the London County Council, signed by the chief engineer and the chemist. The report states that these officers had made an inspection of the Thames, and that on their journey downwards on a falling tide as far as Limehouse the water was as good as they had often seen it in the Thames above Teddington. Below Greenwich it was discoloured in places, in rounding bends of the river, although the main stream was fairly clean. In the neighbourhood of the Woolwich ferry it was also discoloured, and considerably so off the Barking and Crossness outfalls. Returning on a rising tide, they were able to trace the discolouration almost as far as the Tower; but in no case, either on the rising or the falling tide, was any smell, except slight effluvia near Woolwich, at all perceptible. The banks and foreshore of the river were, comparatively speaking, remarkably clean and free from muddy deposit, and this remark applies particularly to the foreshore near the Barking outfall, where in former years considerable deposits of black mud existed. They did not attribute the discolouration they observed to any sewage matter which had been recently poured into the Thames, but rather to the accumulation in its bed of deposits of former years from various sources, as well as those due to the main drainage works. Among the former they point out the discharge from the river Lea and from the various docks on the Thames, some of which they observed in the act of pouring into the stream large quantities of perfectly black deposit. On the whole they consider the river to be improved by the works carried out during the current year, as was to be expected in view of the fact that some 366,300 tons of sludge have been sent to sea since Jan. 1st. They feel certain, they say, that when the Crossness works are brought into action a still further improvement will be the result.

LANCING "ASLEEP."

THE sanitary state of Lancing is attracting a good deal of attention, and one of the opponents to any interference with its existing arrangements talks of a cesspool which is "extra large," which serves for a Home and has served for a grammar school, "with emptying once a year." It would be interesting to calculate the amount of water annually used per head by those for whom this cesspool has served, and to learn what is the yearly amount which has been cast, after being fouled, into this underground cavern, the outlets for which must practically remain unknown. And with this cesspool system people are talking of purity of well water. Under a local heading, "Lancing gone to sleep," one member of the authority is reported to have declared that until there was a system of main drainage in the parish, all they could do was to carry out the cesspool system "in the proper way." We trust that Lancing may not be rudely awakened out of its sleep by disease before it has found out how cesspools can in any "proper way" serve in the place of a system of sewerage such as the place evidently needs.

MEDICAL REGISTRATION.

IT may be well to direct special attention to an announcement published in our last week's impression, in which the Registrar of the General Medical Council gives his annual warning of the risk and inconvenience attending the neglect of any registered practitioner to give notice to the Branch Registrar by whom he was originally registered of any change in his address. It is also important that early attention should be given to any letters of inquiry that may have been sent to him in regard to that matter.

REVOLVER MANIA AND ITS TREATMENT.

MANY, besides Mr. Hannay, must have expressed a hope that before long the law will be strengthened by an Act forbidding persons in ordinary life to carry revolvers about with them. Three cases of shooting, or threatening to shoot, which have lately been reported are attributable to this senseless custom. Of these two occurred among mere boys, and one resulted in mortal injury. A third, associated with a drunken brawl, might easily have proved fatal but for the intervention of the police. In no one instance can the weapon be said to have been at all necessary to the safety of its owner. In the two cases first quoted it figured as a mere boy's plaything, in the third it was a drunkard's pocket companion ready for use at the bidding of any tipsy caprice. Only a few weeks have elapsed since it was used by a person in very similar circumstances with fatal effect upon the persons of two other men. We confess that specialism in legislation has for us no great attraction. It is best that whatever can be so arrranged should be left for settlement by

the exercise of sound private judgment. It is with social evils, however, as with diseases. The atmosphere and climate of sound opinion may in some conditions do much to ensure improvement, but where specific evils exist we have need of more than such merely tonic agencies. Particular methods of cure are then called for, and we would once more insist that in order to combat effectively that form of social illness—the revolver craze—a prohibitory tax is the mildest known remedy.

CHOLERA INTELLIGENCE.

IT seems clear that there is a distinct diminution in the prevalence of cholera in Spain; and even Gibraltar, which is always prompt in imposing quarantine restrictions, has now removed them as regards arrivals from Spain. Up to the end of the first week in November the total recorded cholera attacks in Spain was 5477, and the deaths 2840. From the Levant comes the intelligence of a spread of the disease in a north-westerly direction, the town of Adana, in the south of Asia Minor, being now infected. The result has been an extension of quarantine further northward from Selefke to Anamour. At Aleppo there have been 233 cholera deaths since the middle of October, and two or three fatal attacks still occur daily. Antioch has also been severely attacked. Indeed, the entire province has been more or less infected, but hopes are now entertained of its diminution. Up to Nov. 8th 413 deaths had occurred at Hamah, and at Homs 101 cases and 16 deaths had taken place.

THE TREATMENT OF REFUSE.

A NUMBER of medical officers of health, inspectors of nuisances, and others have recently visited Ealing to inspect the dust depôt, where they had an opportunity of examining various appliances for dealing with refuse. Ealing possesses a destructor, of which an important feature is the "fume-cremator" for the destruction of the smoke which is given off in the combustion of the refuse. One of the disadvantages which is said to attend the use of destructors is the discharge of fine dust from the shaft; in this apparatus the smoke is exposed to a very high temperature, stated at the time of the inspection to be 1200° Fahrenheit. It will be interesting to know if this method overcomes the difficulty mentioned. There were also exhibited a road sweeper and cart-filler combined, and a water van which has been designed to prevent the clouds of dust which often occur during road watering. All are the invention of Mr. Charles Jones, A.M.I.C.E., who recently lectured at the Sanitary Institute on scavenging and the disposal of refuse and sewage.

THE NEW AMERICAN TARIFF.

SIMULTANEOUSLY with the publication of the new American tariff there has appeared in the form of a Blue-book an exhaustive list of the import duties levied by foreign States upon British merchandise, which serves in a striking way to mark the recent course of events in their bearing on these matters. It is four years since a similar return was last compiled, and the changes which have occurred during the interval have been neither few nor small. In Russia, for instance, a uniform addition to the custom dues has been made of 20 per cent., the only commodity which escapes the increased impost being coal. But by far the most important of these changes is that brought about by the McKinley Act. For a time it is certain to occasion great and serious dislocation in the course of trade, although the very extravagance of its repressive character threatens to bring about its speedy repeal. Upon the trade in drugs and chemicals, however, it will probably have no very marked effect. The changes made in the duties chargeable upon such articles are fully set out by a display of the new and old tariffs side by side in a recent number of our contemporary the *American Druggist*, from which it appears that no attempt has been made to carry out in these departments the protective policy which constitutes the spirit of the Act. With the exception of sulphuric acid all the important commodities of this description are left subject to the previously imposed rates of duty, but even here the newly invented and more stringent regulations as to the declaration of goods and their values and the mode of passing them through the Custom House cannot fail of having an effect, and that a mischievous one.

SMALL-POX IN MADRID.

THE official returns relating to the public health in Madrid during October have just been issued, and show a considerable increase in the fatality of small-pox during the month in that city. The deaths from small-pox, which had been 138 in August and 421 in September, further rose to 654 in October. Thus the annual rate of mortality in the city from small-pox in October was equal to 16·4 per 1000 of the population enumerated at the last census in 1888; and the mean rate in the three months ending with October was not less than 10 per 1000. Apart from this severe epidemic of small-pox the unsatisfactory health condition of this city is testified by its general mortality statistics. The deaths in the city from all causes, which had been 1407 in August and 1673 in September, further rose to 2057 in October, and were equal to an annual rate of 42·6 per 1000; the rate, therefore, from all causes other than small-pox was no less than 26 per 1000. The ages at which the fatal cases of small-pox occur in Madrid point conclusively to the neglect of vaccination, as the age-distribution of the persons dying from this disease more nearly agrees with that which prevailed in prevaccination times. Of the 421 deaths from small-pox in Madrid in September, 53·7 per cent. were of children under the age of six years, and only 11·2 per cent. were of persons aged upwards of twenty-five years; whereas of the 1026 deaths from this disease registered in the whole of England and Wales in 1888 no less than 46 per cent. were of persons aged upwards of twenty-five years.

THE SANITARY STATE OF ANCOATS.

THE inhabitants of Ancoats are pressing for the adoption of measures which will help to remove from their midst the conditions which they believe so largely tend to cause high rates of mortality and of sickness. These conditions are stated to be chemical works with the turning of chemical refuse into the sewers, the Holt Town manure works, and back-to-back houses. As to the injurious influence of some of these conditions no one can doubt, and we may take it that under the present sanitary administration of Manchester every effort will be made to ascertain how far the allegations, as a whole, are correct.

CREMATION FROM A RELIGIOUS POINT OF VIEW.

WHATEVER objections have been urged against the practice of cremation have, it must be admitted, little if any foundation in religious principle as expressed in Scripture. Ecclesiastical doctrine finds no valid objection to the practice. Inspired by no such instinct as that which caused the Egyptian to preserve, in hope of an actual revival of its present atoms, the perishing body, and still less by any chimera which would hold that the soul is imprisoned in the decay of its former home, it leaves unrestricted the wide sanctions of Holy Writ. As far as religion goes, indeed, there is not even apparent an attempt to discountenance

cremation, unless it be taken to be shown by passive refusal and contrary preference. The example of early times under which the owners of the most venerated names were laid in the earth from which they arose has guided this preference, the existence of which is evident. The sentiment is a worthy one. Nothing can be gained by seeking to crush it, nor is there anywhere a desire to do this. It need not imply opposition to the proved necessities of sanitary existence, not even to cremation if in any case capable of such proof, and its free exercise under wholesome conditions remains as much a common right as the liberty to burn where the cause of death can be clearly shown.

HONOURS TO PROFESSOR KOCH.

THE German Emperor has conferred on Professor Koch the Grand Cross of the Red Eagle, in recognition of the value of his important discovery. The insignia were handed to the Professor by the Emperor personally. This is the first time since its bestowal on von Humboldt that a German scientist has received the above honour. Professor Koch has also been presented with the freedom of the city of Berlin—an honour shared by only three other distinguished men—namely, Prince Bismarck, Count von Moltke, and Dr. Schliemann.

A NEW USE FOR HOSPITALS.

THE adoption in Germany of the law of compulsory insurance for workmen whose wages reach a certain standard, and the stimulus thus given to insurance generally, have led to quite a novel use being made of a considerable number of beds in many of the large hospitals. In the report of the Berlin Charité Hospital for 1888-89, recently issued by the director, Dr. Mehlhausen, this subject is specially referred to. A considerable addition has been made to the labours of both the medical and clerical staff, owing to the above circumstance. Many persons who have suffered injuries, the duration and full extent of which were not quite apparent to the private practitioner who has them under care, also persons who did not feel satisfied with the pecuniary damages awarded to them for accidents, have entered the hospital more with a view to their progress being kept under observation than for actual treatment. The authorities have offered every facility for the admission of such cases, in so far as they have not interfered with more serious ones. They regarded it as very desirable to do so because such doubtful cases, which usually consist of nerve disease, involving great difficulties of diagnosis, and which are frequently regarded by the person responsible for the injury and damages as simulated, present features of the greatest value from an educational point of view. The addition of this new work to the hospital has involved the clerical staff in an enormous correspondence, and has thrown upon the medical staff, in addition to their professional work, a most responsible and difficult task in the preparation of reports on the cases.

DIPHTHERIA IN ANIMALS.

IN an editorial article in the *Veterinary Journal* for November, Professor Walley calls attention to the paucity of evidence in support of the opinion that diphtheria in man is often to be attributed to transmission from the lower animals. He rightly asserts that the question is one which should be settled in the interest of hygiene. As regards horses, experience enables him to assert positively that they are exempt from the disease. He traverses the statement lately made that outbreaks among people living near horses and the alleged greater proportion of diphtheria among cavalry than infantry, is to be assigned to infection from the horse. The only instance of cattle affected with a disease resembling diphtheria is one recorded by himself some years ago, where some calves and their attendants were affected, but he now thinks there were grave doubts as to whether the affection was diphtheria. Dogs appear to be exempt, but cats have suffered from diphtheria, probably infected from human cases. Fowls and pigeons suffer from a disease somewhat resembling diphtheria, but more positive evidence is needed to warrant a conclusion that this is communicable to the human species. "In fact," he says, "there is not an instance, as far as is at present known, of animals transmitting this specific, and, it might be said, peculiarly human disease to mankind," and without venturing to assert that such may not occur, he thinks it is most unlikely. He invites records of observations of diphtheria in animals in order to assist in elucidating the mystery that hangs over the etiology of the disease.

"À BERLIN!"

IT may prove useful to medical men about to join the extraordinary number of their colleagues already in Berlin to invite them to calmly reconsider their plans. What do they hope to gain by going there? What they will gain will be this: If they are energetic and can endure squeezing and crushing, they may join the crowds of doctors from every known land who surround the beds occupied by patients under treatment by Koch's method. One of the staff will address briefly those immediately surrounding the bed, while the scores or hundreds who are crushing around this inner circle remain absolutely ignorant of what is being said or done. The cicerone passes from patient to patient in a few minutes, and then the demonstration is over. Should the energetic visitor manage to be well placed at the bedside, can he gain much by the brief inspection of the patient lasting a couple of minutes? Can such a visit or several such impart any instruction? If the visitor cannot speak German, of course the difficulties are greatly increased; indeed, they become insuperable. The actual inoculation is precisely similar to any other subcutaneous injection, yet hundreds of medical men may be seen fighting and crushing their way to see this, as if it were something important. Anyone seriously interested in this question would act wisely to first learn all that he can as to the method—and we hope to keep our readers well informed—and await some practical results, and afterwards, if he thinks it desirable, go to Berlin for some weeks. To go for a few days, as so many have done, is merely waste of time and money.

DYSENTERY CAUSED BY CALOMEL INJECTIONS.

THE hypodermic or intra-muscular injection of calomel suspended in oil, which is a form of treating syphilis much more practised abroad than in this country, is not without occasional inconveniences; thus Dr. Cramer reported a short time since a case where, after six injections at intervals of a week, a patient became the subject of very severe dysentery. This accident was not due apparently so much to any idiosyncrasy of the patient as to the fact that he had been secretly dosing himself with iodide of potassium, which permitted a large quantity of mercury to collect in his tissues.

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Professor Flügge, Director of the Hygienic Institute in Breslau, has been appointed Director of the Hygienic Department of the New Bacteriological Institute.

Cracow.—Dr. Mars has been promoted to an Extraordinary Professorship of Midwifery.

Kharkoff.—Dr. Tolochinoff has been promoted to the Professorship of Midwifery.

Zurich.—Dr. Geisler has qualified as *privat-docent* in Medicine.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Paper, Surgeon-General of the 1st Prussian Army Corps; Dr. Don Narciso Carbo de Aloy, Professor of Therapeutics in the Medical School of Barcelona; Dr. Senna, Professór of Anatomy in the University of Coimbra.

WE are informed that a petition in favour of Dr. Holland of St. Moritz has been drawn up by Dr. Lauder Brunton and Dr. Keser, and addressed to the Swiss authorities. It bears the following signatures:—Sir Andrew Clark, Sir Alfred Garrod, Sir Joseph Lister, Mr. Jonathan Hutchinson, Drs. Lauder Brunton, Symes Thompson, Douglas Powell, Mitchell Bruce, Ferrier, Hermann Weber, T. Williams, E. Sansom, and Stephen Mackenzie. Owing to urgency, the petition had to be sent before other names could be added.

SIR MORELL MACKENZIE informs us that he has been watching some cases of laryngeal phthisis during the last few days, with the view of ascertaining temperature &c., and will commence injecting Koch's fluid at the end of this week or the beginning of next at the Throat Hospital, Golden-square. Medical men desirous of following the treatment will be admitted according to priority of application by letter.

BRIGADE-SURGEON EDWARD CORRIGAN MARKEY, Medical Staff, has received the distinction of the Companionship of the Most Honourable Order of the Bath; and Surgeon-Major William Reed Murphy and Surgeon Frederick Arthur Rogers, both of the Indian Medical Service, Bengal, the Distinguished Service Order, in recognition of their services during the late Chin-Lushai Expedition.

MR. CHARLES E. HOAR asks us to state that he has been requested to call a meeting of the medical men who are in the habit of attending the Kent County Police, to be held at the Old Grammar School, Ashford, on Friday (this day), at 3 P.M., in order to agree to a course of action which will procure a revision of the scale passed at the last meeting of the Joint Standing Committee.

THE second of the annual series of post-graduate lectures under the Richard Middlemore endowment will be delivered on Dec. 9th and 16th at the Birmingham and Midland Eye Hospital, by Mr. H. Eales, surgeon to the hospital. The subjects will be "Headache and other Results of Ocular Strain and Distress."

THE influenza is stated to have broken out in a severe form at Fünfkirchen, in Hungary, and all the schools in the town have been closed. The epidemic has, it is reported, also attacked the horses in one of the cavalry barracks in Vienna.

IT has been decided by the French Government to establish an Institute of Animal Vaccination at Saïgon, to which a bacteriological institute will be attached.

THE President of the Royal College of Physicians has nominated Dr. Dickinson to be the Harveian orator next year, and Dr. Allchin to deliver the Bradshaw Lecture.

A PORTRAIT of Professor Ludwig has been presented to the Royal College of Physicians by Dr. Lauder Brunton, for the new laboratories.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE forty-ninth session of the General Medical Council commenced on Tuesday, the 25th inst., in the Council rooms at Oxford-street, the President, Mr. John Marshall, in the chair.

The PRESIDENT delivered the following address. He said: "The Council will, I am sure, agree with me in expressing deep regret at the sudden and unlooked-for death of our former colleague, Dr. James Matthews Duncan, who sat with us for five years as an earnest and independent member. It was in April, 1888, that his term of office as a Crown nominee expired; and, doubtless, if he had so desired, he would have been renominated had it not been for the provision in the Medical Act of 1886, according to which the Crown representation was, on the occurrence of the next ensuing vacancy, to be reduced from six to five members; so that neither could he himself be re-elected nor could the vacated seat be otherwise refilled. Dr. Duncan's characteristic decision of opinion and action, and, above all, his kindly disposition, will long be remembered by those who knew him well." Turning now to the functions and business of the Council, the President mentioned that for the guidance of the Executive Committee, to which colonial registrations had been entrusted by the Council, a legal opinion had already been obtained to the effect that colonial *ad eundem* degrees could be recognised, but of course only for entry on the Colonial and not on the Home Register. It is still the fact, as I am informed by Sir Charles Lennox Peel, that 'no negotiations are at present pending with any foreign Power with regard to the reciprocal registration of medical degrees.' The Swiss authorities appear to adhere to their requirement, from alien practitioners, of a complete examination in all the subjects proper to a medical education; and this may also be said to be the present attitude of the French authorities. There may be some advantage in my here stating publicly that preparations for the correction and circulation of the Medical Register for the year 1891 have already been commenced in the office; and that it is the interest of every qualified practitioner that his name, place of abode, and title or titles, should be accurately recorded in the forthcoming volume. In connexion with this subject I may add that the correct issue of voting papers for the ensuing election of direct representatives to this Council, which will take place in November, 1891, will necessarily be largely influenced by the accuracy of the official Register for that year, which, subject to the latest corrections, will constitute the legal electoral list. As was done in 1886, a letter of inquiry will, next year, be sent to every address in the English Branch Register—the only one which the London office is authorised to control,—so as to insure the utmost attainable accuracy before the voting papers are distributed. I may here mention, with all due respect, the ingenious proposals for the improvement of the Medical Register, which have been prepared and circulated by Surgeon-Major Evatt, of the Army Medical Department, and which have just now been submitted to the consideration of the Executive Committee. Since the last session of the Council thirteen applications have been received in the office for registration in the Dentists' Register, under Section 37 of the Dentists Act, the working of which has recently been regulated by the President, in accordance with the rules laid down by the Executive Committee. Agreeably to a resolution passed by the Council on June 6th last, these cases have been brought to the notice of the Executive Committee, and have, after consideration, been referred by it to the President, with a request that he will investigate each case, and will report the results to the committee at its next meeting. It will be remembered that the applications just mentioned come under certain exemptions, which, as stated in the latter parts of the 37th Section of the Dentists Act, may be made by the Medical Council 'if it sees fit'; and, further, that any rules, and therefore such rules of exemption, may be 'modified' or 'revoked' under the authority given to the Medical Council by the following Section 38. The exemptions in question,

which involve the non-requirement of a special education and examination for a recognised registrable diploma, refer to persons who have commenced their dental education before July 22nd, 1878, and have completed it after that date. It has been resolved, on my own special suggestion, by the Executive Committee to recommend to the Council that on and after July 22nd, 1891—by which time these exemptions will have been in force for thirteen years—they shall be discontinued. Besides two applications for restoration to the Medical Register, after penal removal, there are several cases requiring investigation as to alleged misconduct of various kinds. In addition to instances of complaints brought directly before the Council from the outside, there are some in which the Council has taken a step which, though not actually new, has hitherto been rarely adopted—namely, to determine whether or not, when one qualification has been removed from the Register, after it has been penally withdrawn by an authorised qualifying body, this Council should, with due inquiry on its own part, proceed, in such cases, to erase any remaining registered qualification or qualifications, together with the name of the practitioner. It may here be observed that such erasure of a qualification from the Register can in some cases be followed by the deprivation of the corresponding diploma by the qualifying body concerned; and it is possible that other bodies not now possessed of such a desirable power might seek to obtain it. Concerning the naturally linked subjects of education and examination, no widespread measures appear needful to be taken by the Council at its present session; but at the meeting next May the committees on those subjects will possibly be prepared to make reports and suggestions. Some necessary questions concerning the utilisation of a five years' period of study will have to be discussed. A recommendation of this Council, bearing date, I think, 1886, mentioning six cases as the lowest number to be required, has been quoted as its existing dictum on this subject; but, in a later recommendation, dated May 26th, 1888, twelve is the lowest number formally decided on by the Council. It is, moreover, on record that the qualifying bodies generally had duly attended to this point; and, subsequently to 1888, that either larger numbers of such attendances or certain other special guarantees had been exacted, or would be so forthwith. In the report of the Education Committee presented in June last, and printed by authority as an appendix to the minutes, it is expressly noted that the 'number of cases in midwifery to be taken care of shall be such as the examining body shall deem expedient.' The several questions contained in the motion submitted by Dr. Watson to the Council in June last (vol. xxvii., p. 143) relative to the subdivision of the subjects of the final examinations in medicine, surgery, and midwifery were, in accordance with the wish of the Council, forwarded to its legal advisers. Very full and complete answers to these questions are now laid before the Council. The exhaustive answers to the several questions put are all in an affirmative sense, and thus establish the legality of such separation of the final examination subjects as may seem to be reasonable and defensible. This, however, does not dispose of the question of the desirability of such a mode of splitting up the final examination, in regard to which point, doubtless, differences of opinion do and will prevail. Refraining from any lengthened discussion, I may remark that, provided the partial and the completed examination be held and passed within certain prescribed limits of time, certain advantages in respect of the final fitness of a successful candidate might be expected to accrue. The Council will doubtless contemplate some further proceedings in reference to its suspensory resolutions passed on June 6th of the present year, concerning the registration of the diplomas in Sanitary Science granted by the University of Glasgow in October, 1889. Even if no general principle of treatment in regard to those diplomas be adopted, a few special cases will be presented for the consideration of the Council. Moreover, the Council would materially assist the several registrars if it would pass a resolution in regard to the Public Health diplomas recently granted by that University as a result of its modified examinations held only a few weeks since. It is certain that all of the qualifying bodies are even now studying the numerous aspects of the proposal to extend the period of professional study to five years, and it is obvious that the less interruption generally is offered to the consideration of the new moulds into which medical education and examination may come to be cast, the better and more harmonious results may be looked for. In the absence of a well-marked necessity, it would seem that the immediate renewal of visitations or inspections on a large scale would be decidedly premature. Turning now to a concrete subject matter, I desire to mention that the Pharmacopœia Committee, after much and diligent labour, and with assistance most ungrudgingly given from outside the Council, has fulfilled its difficult task; and the active chairman of that committee will present the results in a report, embodying a supplementary list of pharmacopœial preparations, for consideration and ultimate sanction by the Council, the sole authority constituted under the law by which this matter can be finally regulated." Referring to the Midwives' Registration Bill the President said: "Doubtless such a measure is in its inception intended for the advantage of the humbler ranks of society; but it must be observed that all classes will or may be benefited by the collateral training of women, who should, however, be employed under special medical supervision. Benefits of this kind have a tendency to spread or overflow into other channels than those at first contemplated. Judicious modifications of any proposed Midwives Bill may undoubtedly yet be suggested; and these, to have weight with the authorities or favour with the general public, should be based on express utility, and on the broadest charity and benevolence. I have reserved for the final subject of this address the question which will be raised of adding to the number of the direct representatives on the Council. This proposal, though certainly open to discussion by the Council, is one which would have to be actually judged and decided upon by an authority outside of and superior to the Council itself, to which authority, indeed, it would be more profitably addressed. The result of my own observation is that the Council is now undoubtedly a very powerful body, and, for the present at least, quite large enough; whilst, with its existing constitution and opportunities, and the advantages of free discussion, if it continues in the simple and earnest pursuit of its duties and obligations, its influence for good must steadily increase. In that expectation I close these observations, that the work immediately before us may be at once commenced."

On the motion of Sir JOHN SIMON, seconded by Mr. WHEELHOUSE of Leeds, the President received a vote of thanks for his address.

Diplomas in State Medicine.

On the motion of Sir JOHN SIMON, that the Council's resolution of November last suspending the operation of the previous rule in regard to the diplomas in State Medicine, it was proposed "that this rule should not continue in effect beyond the end of the present calendar year, and that on the first day of January, 1891, the said rule, with any amendments which during the present session the Council may have made in it, come into operation." He spoke of the extreme importance of the question, and pointed out that it was a case in which the Council was required or permitted to exercise the power given to it by the Legislature, as it concerned the public services. Under the Act of 1886 it was necessary to enter on the Medical Register sanitary diplomas considered worthy of being so entered. Every medical practitioner was supposed to have a minimum qualification in Public Health in possessing his qualifying diploma. As an example of this, in many instances Poor-law officers were found acting in the capacity of officers of health. As a matter of fact, in 1886, when provision was made for a special diploma in Public Health, it was intended that it should be a special diploma corresponding in some degree to what the Fellowship of the College of Physicians or College of Surgeons should be. Moreover, in 1888 it was laid down as law that no one should hold a first class sanitary appointment for a county or a large town unless he held a special diploma in Sanitary Science. The Council had great responsibility in this matter, as it had to settle what examination was sufficient for that diploma. The Council had to attend to existing interests, and a certain time had been allowed to elapse before fixing the time for the enactment of the alterations. It had also been provided that the Council's requirements should not come into effect with regard to existing practitioners. Amongst those recommendations was the one which is now in question, to provide for a special curriculum—namely, that after a man had passed his examination and taken his regular diploma

he should undergo a certain special study, and that it should be certain among other things that he should have done laboratory work, and that he should have had opportunities for practical work in the public health inspection, and so on. He considered that the matter of practical instruction for diplomates in Public Health was becoming urgent in England, because after a little while the English Public Health Act of 1888 would come into universal operation, and it was incumbent on the Council not to let this matter remain in the present slipshod state, but to have proper regulations regarding the study of sanitary science.

The motion was seconded by Professor STRUTHERS.

Dr. HERON WATSON asked what action had been taken on the resolution moved by Dr. Atthill and seconded by Dr. Cameron on Nov. 30th last, and which was carried by the Council, relating to the Council's want of knowledge as to how far medical officers of health may be able or willing to undertake the education of pupils in sanitary science, and he wished to know whether the Council had any further means now of giving an answer to this question.

Sir JOHN SIMON: We take it for granted that each member of the Council has looked into this matter for himself.

The CHAIRMAN: No question has been asked on the subject, and no information has been received.

Dr. HECTOR CAMERON pointed out that the only body, so far as he knew, which had inquired respecting this subject was the Faculty of Physicians and Surgeons of Glasgow, which he represented. Having read a passage supporting that statement, he said he happened to know from a conversation with Dr. Russell, medical officer of health for Glasgow, that he for one was quite unable at present to do anything to carry out this rule of the Council. While he fully recognised that there was a great deal in public health which could not be learned in any way but by practical teaching, at present he was under obligation to devote the whole of his time to sanitary work. Dr. Cameron had no doubt, however, that if the municipality of Glasgow and other municipalities were approached by the Council he was inclined to think they would meet the Council's wishes. He thought that it was unwise for the Council to pass an inflexible rule of this sort, which was utterly impossible of accomplishment in Glasgow and in other parts, he believed in Ireland. The Faculty of Physicians and Surgeons of Glasgow were anxious to follow out the rules laid down by this Council in regard to sanitary science, but this rule was at the present time impossible to be carried out in Glasgow.

Mr. BRUDENELL CARTER pointed out that quite lately a motion had been brought before the London County Council as to whether the medical officers and others should be permitted to take pupils. The subject had been debated in the Council, and the motion had been rejected by a very large majority. He had differed from the majority, and thought the action a very unwise one.

Mr. WHEELHOUSE recapitulated Dr. Russell's views on this question.

Dr. BATTY TUKE had made several inquiries in Scotland, and found, on the one hand, some grounds for the statements of Dr. Cameron and Mr. Wheelhouse; but, on the other hand, he had ascertained that in several districts there would not be the slightest difficulty in undertaking the education of candidates in Public Health. The question was one of absolute necessity. If it was carried out by the Council, such an educational centre as Glasgow would not remain long in the cold.

Dr. GLOVER supported the motion, and said it would be a matter of great regret if the proposal of the Council should be indefinitely postponed. He was perfectly amazed by the line of argument adopted by the speakers who followed Sir John Simon. No one had a higher regard for Dr. Russell and his great national work than he had. Dr. Russell's reports were among the most important medical documents to be considered in the last decade of the nineteenth century, but he must say he could not understand his position in regard to this matter. He was sorry to hear from Mr. Brudenell Carter that the London County Council had declined to allow its medical officers to teach pupils. Such an action would not advance the reputation of that body for wisdom in the eyes of the profession or of the public. He asked how the medical officers of health were to be trained in the parts of education which in the opinion of this Council were essential if the municipal corporations of the country prevented the Council from having its curricula carried out. How, then, was the work to be done?

Sir JOHN SIMON said that he had had thirty years' experience among medical officers of health, and knew as much as anyone in the country about the question as to whether they should give the whole time to their offices, or whether they should be debarred from private practice. It seemed to be not so much a question of time. The question was whether the interests of the private practitioner would not clash with his public duties; that was in all cases a question of agreement between the employer and the employed, and, generally speaking, the state of the case would be that, except with the sanction of employers, he would not undertake pupils. The demand for practical teaching would arise in the interests of the public service, and he could not doubt that the majority of authorities would gladly accept the means of forwarding the great interests of the public. He pointed out the fallacy of Mr. Brudenell Carter's remarks, and said that had the statement of the case for practical sanitary teaching been properly explained to the London County Council, and had the explainer been able to put his finger upon the recommendation of the Medical Council made in the interests of the public for the teaching of these things, he could not but believe that the County Council would have given a very different vote.

Mr. PRIDGIN TEALE felt that the practical study was the key to the whole position. Objection had been raised that certain portions of the country were not suitable for teaching of that kind. It was always possible to obtain it in other parts of the kingdom, and men would go to get it where it could be had.

Dr. MACALISTER spoke of the action of the University of Cambridge in reference to the desire of the Council on this question. Five hundred applications had been made by practitioners in the country for forms of application and regulations for the examination for this diploma. These had been sent, containing the resolution of the Council in reference to laboratory and practical work. Fifty only had offered themselves for examination. There were already as many sanitary officers in this country as would fill every post likely to be created for the next ten years or more.

Dr. LEISHMAN explained and supported Dr. Watson's position, but admitted that the resolution was essential for proper instruction in sanitary science.

Dr. HEATH, as a contribution to the knowledge of the Council, said that the medical officers of health in Newcastle-on-Tyne had no difficulty in giving this kind of instruction.

Dr. ATTHILL pointed out that it was a great mistake to suppose that Ireland was anxious to create officers of health for other parts of the kingdom.

Professor STRUTHERS, who seconded the motion, urged that out-door work was of very great importance, perhaps the most important of all the work required for the diploma. Most of the duties of the medical officer of health lay outside the College. Some people entertained the idea that a great crowd of students was to be following at the tail of each medical officer. But that was not desired at all—three or four Health diplomas by each of the licensing bodies being all that it was meet to grant at the present time. If the Council but passed the resolution, the licensing bodies would soon take action in the matter, and the town councils and corporations, being composed of sensible men, would very soon do what was required. Their duty as a Council was not to invent side doors (he would not call them back doors) through which these diplomas might be acquired. One got sick and tired of hearing the excuses for exemption and so forth that were continually being made on the part of the licensing bodies. The difficulties were all imaginary, and the Council, as the representative of the public interests, should put its foot firmly down and carry this motion.

After a few remarks from Sir GEO. MACLEOD, Sir WM. TURNER, and Prof. MACNAMARA, the resolution was carried almost unanimously, Dr. Heron Watson dissenting.

The Council ordered that a copy of this resolution be sent to the London County Council and to various other corporations.

It was afterwards agreed, on the motion of Sir JOHN SIMON: "That the Council's rules of June 1st, 1889, relating to Diplomas in State Medicine, be amended by inserting in rule (*d*) an alternative condition" [see below the words in italics], "and that the rule be as follows: 'Every candidate shall have produced evidence that, during a period of six months after obtaining a registrable qualification, he *either* has practically studied the duties of out-door sanitary work under the medical officer of health of a county or large

urban district, *or else has himself held appointment as medical officer of health under conditions not requiring the possession of a special Sanitary Diploma.*'"

Proposed Increase in the Number of Direct Representatives.

Sir WALTER FOSTER, in moving "that, in the opinion of the Council, the time has come when it would be expedient to confer upon the registered medical practitioners resident in the United Kingdom the power of returning an increased number of direct representatives to the General Medical Council, as provided for in Section 10, Subsection 1, Paragraph C of the Medical Act (1886)," did so with considerable diffidence. In submitting the reasons for the resolution, and the grounds upon which he believed it should be carried, he said that whatever improved or increases the representative character of a body like this was to its advantage, and illustrated his statement by reference to other governing bodies. He hoped that a higher wisdom than that which had animated other bodies in the history of the world would be found in this Council. He moved the resolution on behalf of the British Medical Association, who had had this matter before them at Birmingham. The resolution was passed desiring the direct representative members on the Council to respectfully request the General Medical Council to represent to the Privy Council the desirability of exercising the powers in Section 10, Clause 1, par. C, of the Medical Act of 1886, and to increase the number of direct representatives. There was an increasing feeling among the members outside the British Medical Association that the number of direct representatives should be increased. He felt that he was doing right in moving the resolution, and referred to the period when the idea of direct representatives was first conceived. The medical profession, having obtained the representation of that kind, obtained it practically in a form in which it was not so useful or so powerful as it ought to be. He himself had the honour to take some part in the formation of the Medical Acts under which the Council exercised its functions, and as a matter of compromise had persuaded Parliament to increase the representation of the number of direct representatives to three for England, one for Ireland, and one for Scotland. At the same time, however, three additional representatives of corporations were added. The only thing that reconciled them to the increased representation of the corporations was the efficient services rendered by the gentlemen elected under that clause. He should be very sorry to lose any one of those gentlemen. The result of those representative elements, then, so far as the representation of the profession was concerned, was that it placed in the Council among thirty members five gentlemen who were practically lost round that great board. They were found in almost every instance with wonderful ingenuity sandwiched between a Crown representative and a corporation representative, and so scattered that the famous line of Virgil appeared applicable to them:—

"Apparent rari nantes in gurgite vasto."

The Council must feel with him that its character had not deteriorated by the election of those direct representatives; its business capacity had not been lessened, or its tone lowered, and he thought he might say that the Council had been a little more vigorous in remedying medical grievances, and felt stronger because they had among them gentlemen who could speak in the name of 17,000 or 18,000 men whom they represented. One of the great objects of the Council was to keep the profession as pure and honourable as a learned body should be; and he thought the increased power it had shown of late was due to the profession having direct representation. The general work of the Council had obtained a recognition of the profession generally, a greater interest in its work, and a keener eye of criticism into its general proceedings. He thought he might say that the resolution was justifiable, because he did not think the character of the Council had been injured by the direct representatives. He thought it had been increased, and he was of opinion that the Act under which they were working contemplated some such proceeding of the Council as that which he now suggested; and in support of this contention Sir Walter Foster quoted passages from Section 10 of the Medical Act of 1886 (page 67), directing special attention to the fact that the General Council might at any time represent to the Privy Council "that it is expedient to confer on the registered medical practitioners resident in any part of the United Kingdom the power to return an additional member to the General Council." He thought that in the case of agitation or desire for alteration of constitution of any public body it was wise for such body to meet such desire as early as possible. This desire had obtained a very distinct expression on the part of the British Medical Association, and from the profession throughout the country. The argument might be brought forward that the Council was already too large. He would be very glad himself to see it smaller. He knew there was a feeling of that kind existing amongst some of the members, and especially in the mind of their respected treasurer, but they should consider that the money came out of the pockets of the whole of the medical profession. They paid the piper, and they had a right to call the tune. Perhaps at some future time the question as to whether the Council might be lessened in number, and the means by which that could be done might be taken into consideration; but it seemed rather absurd that the profession which found the funds for the working of the Council should be in the position of having only five representatives in a Council of thirty. While the universities and corporations have thirty representatives, five are supposed to represent the voice of the profession. He did not think the balance of the representation in the Council was as it should be. It was impossible that a body which had to criticise the action of educational bodies could do its work efficiently if it were composed only of the representatives of the various educational bodies. And thus while enjoying the presence of twenty gentlemen representing universities and colleges—he did not know any abler twenty gentlemen who could be collected for any general or particular purposes (the Council was honoured by their presence)—eleven of them represented universities that did not exercise any disciplinary power whatever over the gentlemen to whom they grant a degree, and consequently they must tinge to some extent the action of this Council with reference to its discipline in a way that other bodies would not do. Sooner or later the representation of the profession would be greatly increased, and he hoped that one of these days an ideal Council. His ideal Council would consist of twenty-one members, out of which he would like to see five representatives of the Crown; he would like to see the whole corporate representation reduced to seven, and then nine, or the preponderating voice, though not a majority of the Council, given to the direct representatives. He thought such an arrangement would contribute to the efficiency of their proceedings, to the stability of their work, and to the honour and greatness of the profession.

Dr. GLOYER, in seconding the motion, felt that Sir Walter Foster had made so extremely moderate and persuasive a speech that he was afraid to add anything to it. He hoped the Council would entertain the proposal in a friendly spirit. He well remembered the great prejudice against the idea of direct representatives. He assumed that this prejudice was now passed, and acknowledged the extreme consideration with which the direct representatives had been treated by every member of the Council, from the President downwards. He asked the Council to remember that they only formed one sixth of its composition, and their power was very limited indeed. He thought the Council, feeling that the great mass of the profession was agitated by great questions, and sometimes by great feelings of hardship and injustice, would think that one of the best ways of relieving that feeling was to give it a chance of expression at that board, and he would undertake to say that that opportunity would always be appreciated, and would never be abused.

Mr. WHEELHOUSE supported the resolution.

Sir JOHN BANKS said to speak of this Council as a Parliamentary body or analogous to it was a new idea to him.

Mr. PRIDGIN TEALE agreed with Sir Walter Foster in saying that the Council had been strengthened and increased by its direct representatives. In listening to the speech he felt a certain amount of pity for Sir Walter Foster, and thought that he had made a very good case out of a very bad brief. One great fallacy underlaid his argument as to representation. The Council was not really a representative body, but an executive body, and that made all the difference in the world. It should not be forgotten that the members of the profession were indirectly represented through other members of the Council. Sir Walter Foster had not proved his case by pointing out any great evil resulting from the present system. He had not told them how he would find room for the proposed five

members, but supposed it would be by suppressing five particular corporations. It was only four years since the Legislature of this country, after very great deliberation and struggling among the different bodies, laid down that there were to be these five direct representatives, and the results of the working of this new Council, with its altered powers, were only just beginning now to be felt. They had barely got into working order when they were now asked to upset the whole arrangements by introducing five new members elected by the members of the profession.

Mr. BRUDENELL CARTER had never been able to perceive any intelligible principle under which the profession was represented at this Council at all. The Council did not tax the profession, and the incidence of the registration fee was imposed by Act of Parliament. The Council had no power to modify or alter the registration charge. They were simply an executive body, and not a legislative body at all. He considered the sort of agitation that was got up for the representation of the profession as one altogether spurious, and believed that if the Legislature even assented to that application little or nothing would have been heard about it. At present he did not think there was any serious demand for such an increase as that which Sir Walter Foster asked for. The Council was already too large, so much so that the great majority—two-thirds of the Council—had been excluded that day from participating in one of the most important of its functions. He denied altogether, admirable though the direct representatives were, that they knew anything more about the profession than any member of the Council.

Dr. ATTHILL protested against the idea that he came to the Council to represent any corporate interest. He had never attempted to advance the direct interests of the corporation which he represented.

Mr. MACNAMARA thought that Dr. Atthill had struck the keynote of the discussion; he could not understand how their distinguishing direct representatives could advance educational requirements in this Council by adding information, seeing they had not sufficient opportunities for knowing and judging of the requirements.

Sir JOHN SIMON thought there was little prospect of carrying the proposal, and suggested the previous question.

Sir DYCE DUCKWORTH moved, and Dr. PETTIGREW seconded, the "previous question," which twenty members voted for, five members against, two did not vote, and three were absent.

What Constitutes a Qualifying Examination.

Mr. WHEELHOUSE moved, and Sir WILLIAM TURNER seconded, "That the following case, with opinion, obtained and submitted by the President pursuant to the resolution of the General Council passed on June 6th, 1890 (see Minutes, vol. xxvii., p. 143, Clause 8), be received and entered in the minutes:—

CASE.

With reference to the Medical Act (1886), Mr. Muir Mackenzie is requested to advise the General Medical Council on the following points:

a. What constitutes a qualifying examination in Medicine, Surgery, and Midwifery, in conformity with the terms of the Medical Act (1886)?

b. Whether these three subjects may be taken separately?

c. Whether these three examinations, when completed, regarded as one, do constitute the qualifying examination in Medicine, Surgery, and Midwifery?

d. Whether two of these subjects may be passed at one time, and the third (should the candidate either be allowed to present himself only in two subjects, or should he fail in the third on that occasion) be taken separately at a later date, and whether this would still constitute a qualifying examination in Medicine, Surgery, and Midwifery?

e. Whether Medicine, Surgery, and Midwifery be regarded in the meaning of the Act as one and indivisible both for the qualification under the Act, and for the qualifying examination which admits to the Register?

OPINION.

a & b. The qualifying examination in Medicine, Surgery, and Midwifery, which by the second section of the Medical Act (1886) a practitioner is required to pass, is, by the third section of the Act, defined to be an examination in Medicine, Surgery, and Midwifery, held for the purpose of granting a diploma or diplomas conferring a right of registration.

In my opinion, what Parliament, when it enacted that each candidate for registration should have passed an examination in Medicine, Surgery, and Midwifery, meant was that each candidate should satisfy the Examining Body that he was qualified in each of these subjects. It follows, I think, from this construction of the Act, that the examination must be one examination in the sense that one medical authority, or combination of authorities, must conduct the whole examination of the candidate; that is, that he must be examined in all three subjects by one medical authority or combination of medical authorities. But there is nothing, I think, to prevent the medical authority, or combination of authorities, which holds the examination from separating the parts of the examination which relate to the three subjects, and holding them at different times.

c. When a candidate has been examined either by one medical authority or by a combination of medical authorities in all three subjects, and has passed the examination—that is to say, has satisfied the Examining Body of his proficiency in each subject—the candidate will, in my opinion, have passed a qualifying examination within the meaning of the Act, notwithstanding that he may have been examined in each subject at a different time.

d. In my opinion there is nothing in the Act to prevent the medical authority or combination of medical authorities which examines from permitting a candidate to present himself for examination or to pass in two of the subjects at one time, and if he does not present himself for examination, or if he should fail in the third subject, to take it separately at a later date. Details of this kind in the conduct of examinations have, if the construction which I place on the Act is the right one, been left by the Legislature to the medical authorities, subject to the control as regards the sufficiency of the examinations which is vested in the General Medical Council.

e. In a certain sense medicine, surgery, and midwifery must be regarded for the purposes of the qualifying examinations as not divisible; inasmuch as, in order to obtain the qualifying diploma of one of the medical authorities, the candidate must be examined by a medical authority or combination of medical authorities in all three subjects. But the subjects are not indivisible in the sense that the examination in all three need necessarily be held all at one period or on consecutive days.

3, Temple-gardens, E.C., July 18th, 1890. M. MUIR MACKENZIE.

After transacting some further business of a less important nature the Council adjourned.

WEDNESDAY, NOV. 26TH.

Cases of Discipline.—The Case of Dr. Ivor Davis.

At this meeting the consideration of the case of Ivor Davis (M.B. Dur.) was taken up.

Mr. FARRER, the solicitor of the Council, pointed out that the main question to consider in this case was whether Dr. Davis had employed as an unqualified assistant a Mr. Thomas, and if so whether he had employed him properly, or in a manner which deserved the censure of the Council. At the trial of Mrs. Muncey for manslaughter, Mr. Justice Charles, in discharging the grand jury, remarked that "he had read the depositions, and besides the charge against the prisoner it seemed that there were matters in the case which affected other persons, and certainly seemed to him to require the careful attention of those persons who order the discipline of the medical profession." Upon these grounds the Council were obliged to go into the matter. An answer was read from Dr. Davis denying the allegations, and stating that Mr. Thomas was a fully qualified person in all respects except for the final examination; that Mr. Thomas had acted in all respects under his personal supervision and as a medical student reading for his final examination. When the depositions had been gone through, Dr. Davis explained his position to Dr. Glover, and maintained that Mr. Thomas had acted exactly as he himself had acted when he was a pupil. Dr. Davis said the evidence read before the Council was from the depositions taken before the Coroner's Court, and he did not think they were permissible as evidence before the Council, seeing that the evidence was upset before the magistrates. Mr. Thomas, the assistant in question, was then called in and examined by several members of the Council, with a view to eliciting his exact status in relation to Dr. Davis. It appeared that he was a registered medical student—registered as such in 1878—who had completed his attendance upon lectures at Guy's Hospital and passed the primary examination of the Royal College of Surgeons under the old regulations.

The Council considered the case *in camerâ*, and in the end the President announced that the Council had not found Dr. Davis guilty of the offence with which he was charged.

The Case of Mr. East Apthorp.

The next case was that of Mr. East Apthorp, who was brought before the Council in consequence of having been dismissed from Her Majesty's service. He appeared in answer to the summons.

Mr. FARRER read over a circumstantial letter from the captain of the ship, describing the circumstances under which the court-martial was held. It appears that the Royal College of Surgeons had already cancelled his diploma, but that the Royal College of Physicians, on the case being brought before them in the spring of last year, after considering the case, came to the conclusion that he had suffered sufficient punishment, and did not withdraw their qualification. The question for the Council to

consider was whether they thought the further qualification should be removed by striking this gentleman's name off the Register, or whether they agreed with the Royal College of Physicians that sufficient punishment had already been suffered. It had been a very severe punishment indeed, and there was now evidence that he was doing the best he could to earn an honest living. These were extenuating circumstances which might be sufficient to induce the Council to leave on the Medical Register the qualification he still possessed from the Royal College of Physicians. After the case had been considered *in camerâ* the President informed Mr. East Apthorp that the Council, having deliberated upon his case, had come to the conclusion not to erase his name from the Medical Register.

The Case of Mr. J. F. Leeson.

The Council then considered the application of Mr. J. F. Leeson for the restoration of his name to the Medical Register. A question was raised as to whether the Council had the power to restore diplomas which had been cancelled by a corporate body.—Sir DYCE DUCKWORTH pointed out that Mr. Leeson was a licentiate of the College of Physicians of London; but Dr. WATSON thought that it was a purely legal question whether the Council had the power to place upon its Register any qualification except one in medicine, surgery, and midwifery.—Sir JOHN SIMON asked whether they were not entitled to treat this as a case apart from a question of a *de novo* registration, and as a question of restoration. They had always assumed that they could do that.—Mr. FARRER, the solicitor of the Council, thought that Sir John Simon had judged rightly that this was not a new registration, but a question of the restoration of an old diploma; and, again, he thought that in the 24th clause of the Act of 1886 the case was perfectly provided for:—"This Act shall not increase or diminish the privileges in respect of his practice of any person who, on the day preceding the appointed day, is a registered medical practitioner, and such person shall be entitled on and after the said appointed day to practise, in pursuance of the qualification possessed by him before the said appointed day, in medicine, surgery, and midwifery, or any of them, or any branch of medicine or surgery, according as he was entitled to practise the same before the said appointed day, but not further or otherwise." He thought Sir John Simon had quite rightly apprehended the larger question, and that the restoration of the name on the Register was not under the same regulations as the admission of a new name. The further consideration of this case was taken *in camerâ*. As a result of the deliberations the President announced that the Council had come to the conclusion that it was considered desirable to postpone the further consideration of the case until November, 1891.

The Council then adjourned.

THURSDAY, NOV. 27TH.

The Council had under consideration the case of William Montague Hall Welby, who was charged with "issuing objectionable handbills, with the view of obtaining and carrying on an objectionable practice, and of carrying on such practice in conjunction with an unqualified person" The chief evidence was obtained at the instance of Dr. Bateman of the Medical Defence Union, who appeared in support of the charges. The case was considered *in camerâ*, with the result: first, that the opinion of the Council was that William Montague Welby had committed the offence charged against him; secondly, in the opinion of the Council the offence constituted infamous conduct in a professional respect; and, in the third place, that the Registrar had been directed to erase the name of William Montague Welby from the Medical Register.

Petitions were presented from Dr. Reid Rentoul and other practitioners in various parts of the country concerning the better education in midwifery of medical students, and asking the Council to take measures to oppose any legislation having for its object the formation of an order of obstetric practitioners or midwives other than registered medical practitioners.

At the instance of Mr. Wheelhouse, a motion was submitted "That the President be requested to communicate to the Local Government Boards in England and Ireland, and to the Boards of Supervision of Scotland, the opinion of the General Medical Council as to the urgent necessity which exists that candidates for sanitary diplomas should have opportunities opened to them of studying out-door sanitary work under officers of health of counties and large urban districts.

After some discussion this was agreed to, and the Council next proceeded to discuss at some length a motion submitted by Dr. Glover, proposing that the Examining Bodies should require from their candidates additional guarantees of practical instruction in midwifery, and that candidates at the final examination should be required to produce proof that they have personally attended at least thirty cases of midwifery, and been attached as pupils for three months to a lying-in hospital or a maternity institution. Dr. Atthill seconded the motion. Strong opinions on the subject were expressed by Mr. Mitchell Banks, Professor Leishman, Dr. Atthill, Sir William Turner, Sir Walter Foster, Mr. Wheelhouse, and Professor Struthers. The debate on the motion was adjourned.

We shall give a full report of the discussion in our next issue.

PROFESSOR KOCH'S TREATMENT OF TUBERCULOSIS.

(FROM OUR SPECIAL COMMISSIONER.)

THERE certainly has been no decrease in the intensity of the interest with which the practical application of Koch's method of treating tuberculosis was watched last week by the immense crowd of medical men collected in this city from all parts of the earth. The number of fresh arrivals of medical men continues to increase, rather than to diminish, and even the largest hotels have not a room empty. This exhibition of earnestness and zeal on the part of the members of the medical profession to make themselves practically acquainted with one of the greatest discoveries ever made in connexion with the healing art is certainly highly creditable to them as a body. It would be impossible to name any other body of men who would, at such sacrifice of time, money, and comfort, devote themselves to the acquisition of the knowledge of a new branch of professional study. Nor is it only young and enthusiastic men who have journeyed hither. The old and experienced, and the most renowned professors and practitioners of medicine, are no less enterprising in their search for knowledge of the action of Koch's liquid.

The influx of patients is still larger than that of doctors. It is indeed a matter for serious consideration what may be the possible effects on the health of the population by the collection in this city of such a large number of patients suffering from tuberculosis. If anything were wanted to give point to this subject, it would be a reference to the work of Dr. Cornet on tuberculosis. In that work he has been at vast pains to show that wherever phthisical patients are found, there it may with certainty be anticipated that the infective tubercular matter will be present in abundance. In one case he relates how he carefully collected particles of dust from the walls, bedstead, and other articles in a bedroom in a hotel. This dust, when inoculated on guinea-pigs, was proved to contain active tubercular virus, for animals inoculated with it died of tuberculosis. Yet the room whence the dust was taken had only been occupied for a few nights by a young woman suffering from phthisis, and not in an advanced stage.

During the week a great deal of very valuable material has been published in the shape of lectures on the phenomena and results of the employment of Koch's method on human tuberculous patients. Last week you published a *résumé* of the first of these communications—that of Professor von Bergmann. It may be some satisfaction to your readers to know that several eminent persons here, well qualified to judge, have expressed themselves as highly gratified with the character of the communications on this subject which have appeared in your columns, and with the energy you have shown in keeping your readers *au courant* with the latest information on this entirely novel subject.

Professor von Bergmann gave a second lecture last Tuesday, but there was nothing specially calling for notice in it. It was, like all his lectures, admirably delivered,

well arranged, and thorough. Communications have also been published by Professor Fraentzel, Dr. Runkwitz, Dr. W. Levy, and Dr. Köhler. The last named gave a second address on the subject last night, which contains expressions of opinion of much importance. All these gentlemen agree pretty well as to the general and local phenomena which occur after injection of Koch's liquid.[1] A slight discrepancy is to be observed among the results obtained by inoculating persons not suffering from tubercular disease. Most commonly small doses (injections containing but little of the liquid) produce inappreciable results on healthy non-tubercular persons; while large doses produce febrile reaction. It does, however, happen sometimes that non-tubercular persons react somewhat briskly after being injected with the liquid, and *per contra* there are cases of tubercular disease which do not react for some twenty-eight hours (instead of six to eight in surgical cases) to the first dose, and sometimes not even to the second.

Dr. Köhler succinctly sums up his opinion on the subject of the effects of injection of Koch's fluid on tubercular persons thus: 1. Tubercular persons react far more strongly to an injection than non-tubercular persons, as judged by their *general* sensations (assuming the same amount to be given to both). 2. Usually a slight shivering or rigor occurs after six hours, followed by an elevation of temperature to 40° C. (104° F.) and over. 3. Usually the temperature has fallen to or below the normal by the end of twenty-four hours. 4. After repetition of the same dose the reaction grows less. 5. Increasing doses by no means induce increased rises of temperature.[2]

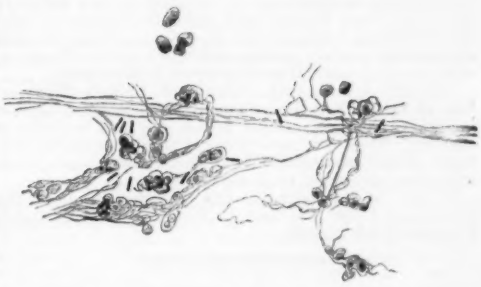
That the liquid can produce such intense general constitutional effects as an increase of temperature to 105° F. and over; stimulation of the heart to 130–140 beats per minute, and even to the excessive number of 160, the respiration keeping pace with both; accompanied in one case by corneitis and conjunctivitis, and in many others by a general cutaneous rash exceedingly like that of scarlatina, sufficiently indicate its extremely powerful nature, without any reference to its specific elective affinity for attacking living tuberculous tissue. Its action on such tissue is most positively spoken of, by those who have used it largely and most extensively, as being specific. This generally held opinion would suggest that the case of inflammation of the conjunctiva and cornea above referred to might possibly be one in which there existed tubercular mischief in the eye, or of course it might have been merely a coincidence. Dr. W. Levy, in whose private clinic the first observations were made of the action of the liquid on human beings by Koch himself, and who has therefore had longer experience than any other person in its use, says: "I saw the characteristic changes occur in every case in which tubercular deposits existed, which were effected by the circulation."[3] Other observers speak of the liquid as "Koch's specific." It is known to have produced icterus in several cases, and in one a second attack occurred in the course of the treatment. The appearance of albumen, if it has occurred, is certainly rare. Even in a case of recurrent icterus, in which the urine showed marked abnormal appearance, being brownish red in colour, the most careful examination failed to show the presence of albumen; nor was it possible to detect any biliary colouring matter by means of Gmelin's test.

Koch has drawn attention to the fact, and it is well to draw attention to it again, that the dilute solution, after having been kept some time, and after repeated heating to sterilise it, becomes inactive, so that it should be used as fresh as possible. Otherwise, the very important property which the liquid possesses—a means of differential diagnosis—may be entirely lost, through the inactivity thus acquired. Hence it should ever be present to the mind, when reaction does not occur, that possibly the failure may be due to inactivity of the injected fluid.

Up to the present there has been greater activity in the employment of the liquid in surgical cases affecting the skin, joints, &c., than in cases of internal tuberculosis or phthisis. It may be authoritatively stated that Koch is hopeful as to the curative results of its employment in pulmonary phthisis, and this certainly makes one inclined to be sanguine also. But it is not unnatural, where all is so obscure, as in cases where the disease is deep-seated, that some anxiety should be felt as to the outcome of the employment of a remedy whose specific effect is the necrosis of the tubercular tissue. Let us try to think what would be the probable course of events in a case of tubercular meningitis, for example, where there is no means of external discharge of necrosed tubercular tissue, and where, up to the present, surgical assistance seems beyond reach. Or, again, take a case of advanced pulmonary phthisis, with large quantities of tubercular deposit in one or both lungs. Would it be safe to risk the setting up of a serious reaction in a person reduced by the long-continued debilitating morbid processes which have led up to this state? Would there be danger in exposing such a person to the high fever and other active processes resulting from the injection of the liquid? Or, again, would the necrotic action of the liquid on such an immense quantity of tuberculous tissue as exists in such a case, even making due allowance for a certain part of it being already dead, be likely to lead to serious results? A direct answer to these questions cannot be given. But it is certain that there is great hesitation here about attempting the treatment of such cases.

The usual reactive fever is observed in case of phthisis after injection, and at first there is increased expectoration. But after the treatment has continued for some time it decidedly decreases. In milder cases there is no doubt in the minds of those who have treated a good many that they are practically cured. Some such cases will be discharged from the Charité in a few days. They will return in a short time to receive an injection, and if there should be no reaction they will be again discharged. This subject is, of course, still in the experimental stage. But when a patient, who has for a long time exhibited all the familiar symptoms of phthisis, is free from them all after five or six weeks of treatment by Koch's method; when he loses night sweats, gains strength and appetite, and weight; when his hæmoptysis ceases and

The subjoined figures are reproduced from a lithograph illustrating the Report of Drs. Fraentzel and Runkwitz.



Tubercle bacilli in sputum before inoculation.

Tubercle bacilli in sputum after inoculation, showing that the bacilli became thinner and shorter, some assuming dumb-bell enlargement at each end; others broken in the centre, and some into rows of bead-like particles.

[1] There is no reason for calling it "lymph."

[2] The course of the temperature during the treatment is a matter of such extreme importance that we shall give next week a chart showing the fluctuations of body heat in one patient from observations made by Professor Fraentzel and Dr. Runkwitz.—ED. L.

[3] Vide Systematische Anwendung des Koch'schen Specifican; Deutsche Med. Wochs., No. 47.

the bacilli disappear from his sputum, and the patient declares that he feels well, and he looks it, there is certainly some ground for saying that he is at least temporarily cured, especially when he loses, as is the case, all reactionary power to the action of the liquid. An increase of weight has not been observed in Levy's clinic, but several patients at the Charité have decidedly grown heavier. Indeed, when one is asked, as is constantly the case, Is there any case cured? one is prompted to ask, What is meant by "cured"?

It might further be asked, How can a sceptical person prove such a case is not cured? All the evidences of the disease have practically disappeared, and this is all in favour of the view that the patient is cured. None of these cases have been very long under treatment, and it remains to be seen—firstly, whether there will be any reappearance of symptoms; and, secondly, whether, if there should be such, they will not readily yield to the renewed treatment. It is only natural to suppose they will do so. If they have lost all the worst symptoms during treatment, it is not reasonable to assume that if the first appearance of a return be watched for, and the patient be at once taken in hand, these symptoms may not rapidly, and much more easily than at first, be brought to an end.

The result of an impartial consideration of the practical results so far obtained in Berlin, and of the published statements of those who have had longest and most varied experience in the use of the liquid, is decidedly favourable. The circumstances do not allow of a definitive judgment. The time has been much too short. But it is undeniable that there are cases which exhibit surprising improvement, and there are very few which do not, if we except four cases of advanced pulmonary tuberculosis referred to by Professor Fraentzel and Dr. Runkwitz. There have not been any bad effects produced in any single case, so far as the tubercular process is concerned; any other drawbacks have been merely temporary, and what were to be expected in the initial stage of the general use of an entirely novel mode of treatment.

If nothing more had been gained than the manifest improvement in the course of treatment, that alone would be a great thing. But there is much more than this gained. There is good reason to believe that the first blow has been successfully struck towards a great and glorious victory. There may be hard fighting yet, and much anxiety and alarm may be felt from time to time owing to temporary checks. But these must not dishearten us. Nor must they diminish our alertness and our caution, either as regards over-valuing what seems favourable or what seems unfavourable.

It is only right that the courtesy and kindness of the members of the staffs of the various hospitals where these cases are under treatment should be heartily and cordially recognised. They seem never wearied in their attention to the many visitors who crowd all day long to their wards, to the utter disarrangement of all regular business.

It may be interesting to the profession to learn that Sir Joseph Lister has brought his niece to be treated by Professor Koch himself.

TRIALS OF DR. KOCH'S REMEDY IN LONDON.

DURING the present week trials of Dr. Koch's remedy have been made by Dr. Heron at the City of London Hospital for Diseases of the Chest, and by Mr. Watson Cheyne at King's College Hospital.

Three patients were injected by Dr. Heron on the evening of the 23rd. One was a well-marked case of lupus of the face in a young woman in whom the injection of ·01 c.c. was rapidly followed by a rise of temperature, reaching at the end of twelve hours to 103·8°. At the same time there developed considerable erysipelatoid swelling of the whole of the affected side of the face, the swelling extending beyond the margin of the lupus area, and serous exudation, followed by scabbing, occurred precisely as described by Professor Koch in his paper. The reaction was severe, the period of high fever lasting eighteen hours, after which the temperature began to decline and the inflammatory swelling slowly to subside. In another case the patient was a non-tubercular, anæmic girl. The injection produced a comparatively slight and very temporary rise of temperature some hours after it was made. The third was the case of a woman with equivocal apical signs of commencing phthisis, but only on one occasion had bacilli been found in the sputum. No obvious reaction occurred in this patient after a dose of ·001 c.c. On the 26th Dr. Heron inoculated two more patients at the hospital who are suffering from tuberculosis of the lung.

Mr. Watson Cheyne inoculated four patients on Wednesday last, at 9.30 A.M.

CASE 1.—This case was that of a medical student aged twenty-three, who had had a chronic abscess over the great trochanter of the femur, which healed and was followed by some thickening over the bone. Recently the scar has broken down and formed a sinus. For diagnostic purposes ·01 c.c. of the fluid was injected. No effect was produced.

CASE 2.—This case was that of a young woman aged twenty-five, who had several strumous scars on the face, neck, and arms, with scattered lupus nodules over the left side of the face and both arms. Bone had been removed from the middle of the right fifth metacarpal bone, the ends of which were ununited and the skin sound. Eleven hours after the injection of ·01 c.c. of the fluid her temperature was 103°, pulse rapid, tongue furred, and she complained of nausea, headache, pain in the back, sleeplessness, and malaise. Five hours later the temperature attained its maximum, 104·4°, and continued high for six hours, being at 103·6° twenty-two hours after the injection. All the lupus spots were swollen, and covered with a thin scab of dried serum, and an area of skin around for a distance of an inch square was of a brilliant-red hue and tender. A painful swollen gland was felt on the left side of the neck. The distal end of the metacarpal bone was considerably swollen and tender, and the skin over it had a slight red blush.

CASE 3.—A boy on whom Mr. Cheyne has twice operated for caries of the os calcis; ·001 c.c. of fluid was injected at 10 A.M.; at 6 P.M. the temperature began to rise, and at 1 A.M. reached its maximum of 101·4°. He vomited once in the night. The ankle became swollen and the skin over it slightly red.

CASE 4.—A boy four years of age, with sinuses and diseased glands in each groin. The right testicle had been removed, and was found to be caseated, but it was not examined for bacilli; ·001 c.c. injected into back. No effect was produced.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5024 births and 3962 deaths were registered during the week ending Nov. 22th. The annual rate of mortality in these towns, which had been 20·8 and 21·1 per 1000 in the preceding two weeks, further rose last week to 21·3. The rate was 20·2 in London and 22·1 in the twenty-seven provincial towns. During the past eight weeks of the current quarter the death-rate in the twenty-eight towns averaged 20·7 per 1000, and exceeded by 0·4 the mean rate in the corresponding periods of the ten years 1880–89. The lowest rates in these towns last week were 15·2 in Brighton, 15·3 in Derby, 15·9 in Leicester, and 17·4 in Preston and in Birkenhead; the highest rates were 27·4 in Oldham, 27·9 in Blackburn, 30·5 in Halifax, and 33·4 in Manchester. The deaths referred to the principal zymotic diseases, which had been 541 and 471 in the preceding two weeks, rose again last week to 481; they included 176 from measles, 70 from whooping-cough, 67 from "fever" (principally enteric), 64 from scarlet fever, 60 from diphtheria, 44 from diarrhœa, and not one from small-pox. The lowest death-rates from these diseases were recorded in Hull, Derby, Newcastle-on-Tyne, and Bristol; the highest in Halifax, Manchester, and Bolton. The greatest mortality from measles occurred in Bradford, Cardiff, Bolton, Oldham, Manchester, and Preston; scarlet fever in Plymouth and Liverpool; whooping-cough in Halifax and Huddersfield; and "fever" in Sheffield, Salford, Nottingham, and Birkenhead. The 60 deaths from diphtheria included 37 in London, 3 each in Birmingham, Portsmouth, and Salford, and 2 each in Liverpool, Manchester, Leicester, and Sheffield. No death from small-pox was registered in any of the twenty-eight towns; one small-pox patient was under treatment in the Metropolitan Asylum Hospitals, but not one in the High-

gate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of last week was 2059, against 2122 and 2117 on the preceding two Saturdays; the patients admitted during the week were 205, against 188 and 186 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 465 in each of the preceding two weeks, declined to 459 last week, but were 11 above the corrected average. The causes of 85, or 2·1 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Leicester, Bradford, Sunderland, and in five other smaller towns. The largest proportions of uncertified deaths were recorded in Sheffield, Halifax, Liverpool, and Blackburn.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had declined from 21·8 to 20·4 per 1000 in the preceding three weeks, rose again to 21·3 during the week ending Nov. 22nd, and corresponded with the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 14·1 in Perth and 16·6 in Dundee to 23·9 in Glasgow and 28·9 in Greenock. The 551 deaths in the eight Scotch towns showed an increase of 24 upon the number in the preceding week, and included 16 which were referred to measles, 15 to diphtheria, 12 to whooping-cough, 11 to "fever," 8 to diarrhœa, 3 to scarlet fever, and not one to small-pox. In all, 65 deaths resulted from these principal zymotic diseases, against numbers declining from 87 to 67 in the previous three weeks. These 65 deaths were equal to an annual rate of 2·5 per 1000, which was slightly below the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had been 10 and 14 in the preceding two weeks, further rose last week to 16, of which 8 occurred in Glasgow and 6 in Greenock. The deaths from diphtheria, which had declined from 18 to 6 in the previous three weeks, rose again to 15 last week, and included 6 in Glasgow, and 2 each in Edinburgh, Dundee, and Perth. The 12 fatal cases of whooping-cough showed a slight further decline from recent weekly numbers; 7 occurred in Glasgow. The deaths referred to different forms of "fever," which had increased in the preceding three weeks from 6 to 9, further rose last week to 11, and included 6 in Glasgow. The 3 fatal cases of scarlet fever were below the number recorded in any recent week. The deaths referred to diseases of the respiratory organs in the eight towns, which had increased from 118 to 137 in the preceding three weeks, further rose last week to 142, and slightly exceeded the number in the corresponding week of last year. The causes of 52, or more than 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·7 and 22·5 per 1000 in the preceding two weeks, further rose to 23·2 during the week ending Nov. 22nd. During the first eight weeks of the current quarter the death-rate in the city averaged 22·1 per 1000, the rate for the same period being 19·5 in London and 18·1 in Edinburgh. The 157 deaths in Dublin showed an increase of 5 upon the number in the preceding week, and included 5 which resulted from "fever," 4 from whooping-cough, 2 from diphtheria, 2 from diarrhœa, 1 from scarlet fever, but not one either from small-pox or measles. Thus the deaths referred to the principal zymotic diseases, which had declined in the preceding five weeks from 23 to 6, rose again last week to 14; they were equal to an annual rate of 2·1 per 1000, the rate from the same diseases being 2·4 in London and 1·5 in Edinburgh. The fatal cases of "fever," which had been 8 and 2 in the preceding two weeks, rose again to 5 last week. The 4 deaths referred to whooping-cough exceeded by 3 the number in the previous week; and the 2 fatal cases of diarrhœa showed a further decline from the numbers recorded in recent weeks. The 157 deaths in the city included 20 of infants under one year of age, and 43 of persons aged upwards of sixty years; the deaths both of infants and elderly persons were below those recorded in the preceding week. One inquest case and 1 death from violence were registered; and 51, or nearly a third, of the deaths occurred in public institutions. The causes of 15, or more than 9 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem.

PROFESSOR KOCH'S REMEDY FOR TUBERCULOSIS.

To the Editors of THE LANCET.

SIRS,—In connexion with Dr. Koch's treatment of one form of tuberculosis—namely, lupus, to which attention is now so strongly directed,—it may be of interest to record the fact with which experience has long made me familiar, that the external remedy which has proved the most potent and effective in promoting the healing of lupoid ulcers is the common yeast, applied to the sore either in its pure state, or made into a poultice with enough of hot soaked linseed to make the application warm and pleasant, and this used continuously for days or weeks. In the numerous cases of this disease which have in past years come under my care for treatment in the Norfolk and Norwich Hospital, I have found no remedy or combination of remedies to produce such good effects as this, used either alone or together with such internal treatment as seemed requisite or appropriate. We are not yet informed of what Dr. Koch's injection fluid is composed, but in view of the strong probability that it may be itself essentially some modification or product of the bacillary growth, it appears to me to have a bearing upon the subject, that even the outward application of a micrococcus (coccus, or its products, or both) should have been found to exercise a distinctly curative influence upon the bacillary disease. As with all lupus sores, my cases have often, after a time, ulcerated afresh, and have returned for renewed, and often again successful, treatment, but not quite all of them have so relapsed; and of the beneficial influence exerted by the yeast in almost all the cases, though in varying degree, I have no doubt. Of course I am aware that the yeast coccus and the tubercular bacillus are very different forms of life, but it would seem highly probable that the principle involved may be the same in both cases—namely, that growing germs can in some way destroy, or be fatal to the growth of others.

I am, Sirs, yours truly,

Norwich, Nov. 24th, 1890. PETER EADE, M.D., F.R.C.P.

To the Editors of THE LANCET.

SIRS,—In his letter on "The Cure for Consumption," which appears in your issue of Nov. 15th, Dr. Harry Campbell advances the theory that what we know as the strumous or scrofulous diathesis is in every case acquired by the individual in early life, and does not depend in any way upon "inborn weakness." He says he has never seen a case of the scrofulous diathesis which did not depend entirely upon unhealthy surroundings experienced after birth, and expresses himself as confident that if all the children of the London poor who ultimately turn out scrofulous were from their birth properly fed "and brought up in country air, under perfectly sanitary conditions, the strumous diathesis would be practically reduced to *nil* among them." On this point I would join issue with Dr. Campbell.

Are we to believe—as we must if we accept your correspondent's theory—that all children are born with an equal store of vitality, whether the parents be full of life and health or the miserable representatives of a decaying race; that the child of the scrofulous, phthisical, or habitually drunken dweller in a city slum inherits nothing of its parent's acquired degenerate condition? Might I point out that the question of food and environment is of quite as great importance before as after birth? Leaving the father out of the question altogether for the moment, how could the child born of a miserable, scrofulous, half-fed mother be expected to enter the world with the same vital capacity and power of resisting disease as the child of the healthy and well-fed woman? The thing is absurd on the face of it. Undoubtedly much could be done to lessen the ravages of tubercular disease by proper feeding and attention to the laws of health,

but when this is tried I would recommend beginning treatment before the child is nine months old, an age at which many children are already victims of tubercular disease. The scrofulous diathesis I would look upon as simply a certain level in that progressive deterioration which is constantly going on among our poor city dwellers and all others living at variance with the laws of health. That this deterioration is progressive, that it deepens with each generation, is absolutely certain, else it is impossible to account for the gradual decadence and ultimate extinction of such families.

I would venture to assert that the tubercle bacillus rarely effectually attacks the really healthy. The superior vitality of the perfectly healthy tissues defies its attack. It is a germ which has a peculiar affinity for the tissues of those wanting in vitality. Some disease germs attack the healthy and enfeebled with equal virulence; others, as that of typhoid fever, seem actually to prefer the well-to-do in health; but the tubercle bacillus has a decided preference for the tissues of those bankrupt in vital energy from any cause except, perhaps, senility. The tubercle bacillus being almost ubiquitous, so soon as a certain low level of health is reached tubercular disease lights up. In some, small-pox, syphilis, or some other exhausting disease, leaves the system in an impoverished state for a time, and the result is the appearance of tubercular disease; in a host of others, old and young, starvation, dirt, and want of fresh air devitalise to what might be called the tubercular level with a like result; but in the vast majority who develop tubercular disease the protective level of vitality has never been attained, a wretched parentage being unable to confer so much. These from the moment of conception are helpless against the attack of the tubercle bacillus, and succumb on first contact with the germ because of their vital poverty.

I am, Sirs, yours faithfully,

Northampton, Nov. 15th, 1890. S. A. K. STRAHAN, M.D.

To the Editors of THE LANCET.

SIRS,—The opinion that I ventured to express in my letter of last week, that we shall ere long be able to cure the malignant growths by means similar to those employed by Koch for tubercle, has since, I am pleased to find, been confidently advanced by Professor Billroth. Such an opinion from such a quarter should stimulate research all over the world. It is not too much to say that the question is no longer whether these tumours are or are not parasitic, nor whether they are or are not curable, but rather who is to be the first to find the parasites, and who the first to devise a means of coping with them when found?

I am, Sirs, yours faithfully,

Guilford-street, W.C., Nov. 17th, 1890. HARRY CAMPBELL.

"THE PROBLEM OF SCARLET FEVER AND THE NOTIFICATION ACT."

To the Editors of THE LANCET.

SIRS,—I observe in THE LANCET of Nov. 15th an annotation under the above heading, which makes the recent pressure upon our hospital accommodation, and the fact that we attributed it to the Notification Act, the occasion of the remark, "the Notification Act would be more triumphantly vindicated if it could be shown to keep the number of cases down to more modest proportions." I am never in a hurry to snatch results which are to be sought for in the health of the community, but I am unwilling that Glasgow experience should by any chance be quoted to the prejudice of notification. Perhaps, therefore, you will allow me to state that though there has been undoubted pressure upon our hospital accommodation through the demand for beds to receive scarlet fever, and in consequence we have had to fall back upon a reserve hospital which has not been used for twelve years, we have always had a surplus of empty beds, which, in most cities, would be considered as an adequate total provision for all circumstances. I mention this merely to show that we had prepared for the adoption of the Notification Act, and, consequently, have not brought upon ourselves a burden we are not able to bear.

But it is of more importance to notice that our experience, though short, all goes to prove that the Notification Act has been "triumphantly vindicated," not it is true by "keeping the number of cases down to more modest proportions" in our hospitals, but *in the city*. I submitted to a recent meeting of the Committee on Health a contrast between eighteen weeks of a scarlet fever epidemic in 1880, when we had our last great demand for hospital beds owing to this disease, and the corresponding eighteen weeks in 1890. In the former period we had no compulsory notification, and hospital treatment was not so popular in Glasgow as it now is, thanks to the efficient management of Belvidere by Dr. Allan, backed by a wise local authority. The following are the figures:—

	Cases.			Deaths.		
	Hosp.	Home.	Total.	Hosp.	Home.	Total.
18 weeks, 1880 ..	416 ..	829 ..	1245	52 ..	161 ..	213
18 weeks, 1890 ..	697 ..	434 ..	1131	24 ..	15 ..	39

In other words, in 1890 we treated in hospital 62 per cent. of the cases known; in 1880 only 33·4 per cent.; in 1890, of all the deaths in the city from scarlet fever, 62 per cent. took place in hospital; in 1880, only 24·4 per cent. The practical outcome is that, although the pressure on our hospitals was much greater in 1890 than in 1880, only thirty-nine lives were lost, as compared with 213. In submitting these figures I drew no inferences, and now I only say that they seem to contain nothing to the disadvantage of notification. Seven years ago, in a "Memorandum on the Hospital Accommodation for Infectious Diseases in Glasgow," I discussed the question, "What will be the effect of compulsory notification upon the proportion of cases treated in hospital?" and my reply was: "There can be no doubt that a larger proportion of the total infectious disease in the city will come into the hands of the local authority for hospital treatment," but, I added, "prevention is the aim and the *raison d'être* of hospitals and sanitary organisation; and the evidence of the success of prevention, in so far as isolation is concerned, is and may be formulated as an increasing proportion isolated of a diminishing total quantity of infectious disease existing. The acme of this success will be the largest proportion isolated of the smallest quantity of disease existing." Our short experience seems to point towards the attainment of this standard of success.

I am, Sirs, your obedient servant,

JAS. B. RUSSELL,

Glasgow, Nov. 19th, 1890. Medical Officer of Health.

"REFINEMENT IN OPERATIVE SURGERY."

To the Editors of THE LANCET.

SIRS,—Under the above heading in your issue of Oct. 25th last appeared a letter on rectal operations, signed by "Gynæcologist." The extravagant language employed, the ignorance of the subject shown, and, above all, the imputing of dishonourable conduct to professional brethren appeared at the time to render your anonymous correspondent's letter unworthy of notice; nor should I venture to refer to it now had it not been for the mischief I know it has caused. I will not discuss the question of indecency referred to by your correspondent, for I do not for a moment believe that such an idea could in any way be suggested by the position of the patient in a surgical operation. There is only one decent position for any operation, and that is the one which affords the best view for the necessary manipulation. As a matter of fact, with the usual arrangement of the towel, there is no exposure either in the lateral or lithotomy position. I do not know what your correspondent's experience of rectal surgery may be, but I do know that it would be to the greatest detriment to the patient if any particular position were insisted upon. Many cases of hæmorrhoids, fistulæ, and other troubles can be efficiently dealt with in the lateral position if the light be good and an assistant at hand. In other instances the only position that can be adopted with due regard to the safety and success of the operation is the lithotomy one.

Every operator of experience, when cutting any distance from the anus, knows how an unexpected and violent hæmorrhage may occasionally occur; a patient's life, indeed, may be in imminent risk from such a cause. The advantage of the lithotomy position can be best appreciated by those who have had to face such an accident. Again, in many cases of fistulæ the better view that the back position affords alone saves the operator from overlooking diverticula, which, undivided, will spoil the success of the operation. Perhaps, too, we should not so often hear of

second operations for anal ulcer, which are in reality often but the outlet of a sinus, had the part been properly exposed on the first occasion.

I will venture to say, Sirs, in conclusion, that the more light in every sense that is thrown upon an operation, the greater the benefit to the patient, and, notwithstanding the threats of your correspondent, I trust that surgeons will continue to operate in the lithotomy position for all rectal cases of a difficult or doubtful nature, and surely the judge as to what position is best for a particular case is neither "Gynæcologist" nor his female attendants, but the surgeon upon whom the whole responsibility of the operation rests.

I am, Sirs, your obedient servant,

November, 1890. HARRISON CRIPPS.

LIFE ASSURANCE AND THE MEDICAL PROFESSION.

To the Editors of THE LANCET.

SIRS,—The profession ought to be much indebted to you for your Special Supplement on the above subject. My experience is that most men insure their lives with less inquiry about the offices they insure in than they make about buying a new horse. I have asked scores, "Why did you insure in the —— Office? What advantages has it over others? How much of your money is to go away from you for "management" in the —— Office?" Very few indeed have been able to answer these inquiries satisfactorily; and this about a matter on which may depend their children's bread! I am no actuary, but I have paid some attention to life insurance as it affects myself and my professional brethren, and I often look over the yearly Insurance Blue-book. I think there are certain plain business principles that all men should look to, and that all can understand in regard to this matter:—1. Have nothing to do with any office that spends much on commission and management. Every penny that goes as commission is out of your pocket, and is lost to you. The lower the management expenses the more money your children will have. In my opinion every office ought to manage itself on 5 per cent. of its gross income or less. 2. See that the accumulated funds are invested in this country, and that they amount to about one-third of the total policies. 3. Insure at the cheapest rates to begin with, and not too much at a time. 4. Next, insure on the system by which only a limited number of payments are made. 5. When you next insure do so on the endowment plan, so that you may have at sixty or so as much money coming in from your policies as will by its interest pay your first insurances, and thereby set you free from any further payments out of your ordinary income. To have to pay premiums after sixty is usually very burdensome. Most medical men's incomes are then shrinking. 6. Never be persuaded to insure by an agent; always go to head quarters, and always try several offices before you fix on one. 7. Try to see and study the yearly Insurance Blue-book before you insure. This will widen your whole grasp of the subject. 8. If you want to insure simply as an investment, and you know your life to be a good one, pay the premiums down in one lump sum, as you get each £100 or so saved. Some offices are much cheaper by this plan than others; so try a number before you fix on one. 9. Remember you can deduct your premiums each year from your income on which you pay income-tax. 10. If you have sons growing up, and you can afford it, effect an insurance on each when they are about eighteen or twenty. If this is done in an office where the premiums diminish after the first five years, what could be a more suitable present to a son on getting married or settled than such a policy, on which he would have only a small yearly sum to pay? What step more calculated to teach him thrift and providence all his life? And at that age he will not have had any diseases that will cause increased premiums to be put on his life. 11. Do not put all your eggs, or even most of them, into one basket. There are many good offices to choose from. 12. Try to realise that, were we wise, prudent, and business-like, one thousand medical men of good health and good habits could form a mutual insurance fund, employ a committee to receive the money and invest it in railway debentures, a clerk to send the notices and keep the books, and so save probably 20 per cent. on the present premiums paid to the average offices. 13. Effect your first insurance the moment your income exceeds your wants. The sooner it is done, the cheaper is the rate to be paid all your life. 14. If you are having children, effect an extra moderate insurance on your life when every child is born. 15. Look on insurance as being just as much a necessary condition of modern social life to every man who has no fortune as honesty and honour in life. You certainly have no moral right to beget paupers for others to support.

T. S. CLOUSTON.

Royal Asylum, Morningside, Edinburgh, Nov. 24th 1890.

DIPHTHERIA IN KENSAL TOWN.

To the Editors of THE LANCET.

SIRS,—I should like to be permitted to make a few remarks on this matter in reply to the annotation which appeared in your issue of Nov. 22nd. As medical officer of the Kensal Town district of the Chelsea Union, and having practised here for the past eleven years, one would think that, serving in this capacity, I should have had at least some cases of this complaint to attend to either as private or public practitioner. Such, however, has not been the case. I have not reported one this year. It would be interesting to know the percentage of deaths to cases reported, for I cannot help thinking that some, at least, of the cases reported have been mistaken as to their diagnosis. I know of two cases where this diagnosis was not confirmed after a second opinion had been asked for. If this be true, it would give Kensal Town a worse name than it deserves. As to the origin of the disease, Dr. Seaton's large experience leads him to give a very guarded opinion. I should just like to throw out this remark: that until diphtheria makes its appearance, there is no suspicion of imperfect drainage: but once established, drains may be found faulty, as the following cases will show.

About five years ago I was called in to attend a family of six children and two adults. They lived in two upper rooms of a house, using the back one principally for the children. They had always noticed a very unpleasant smell in this room. The first child attacked was the worst case of diphtheria I ever saw. On attempting to look down his throat, one looked upon a complete curtain of diphtheritic membrane extending from the hard palate on to the tongue. This I removed three times, using the French method of applying solution of chloral hydrate. After the third removal it did not return. Half of the children had this disease, the other half had scarlatina; the mother also had a bad throat and aborted; she was kept in the front room. The whole family recovered. I suspected the drains, my theory being that the warm air of the back room drew the foul air from the drain up the stack-pipe of the washhouse along the gutter into the window. The drains were examined, and found to be improperly trapped, and the connexion with the sewer imperfect; this was at once made good, and all smells were removed.

Another writer in THE LANCET a few weeks ago advanced the theory of damp being the cause of this disease. There may be a great deal of truth in this, as in this part we are situated on a thick clay soil, and the houses are very close to the ground, so much so that I have heard complaints of the carpets soon rotting. An attempt has been made to prevent this by putting in ventilating plates to get a current of air under the floors. I think these remarks are worth consideration, in endeavouring to arrive at a solution of the etiology of diphtheria.—I am, Sirs, yours truly,

Harrow-road, Nov. 25th, 1890. A. L. GRIFFITH.

HYDERABAD CHLOROFORM COMMISSION.

To the Editors of THE LANCET.

SIRS,—Having noticed in your columns several letters and addresses on the administration and effects of chloroform, and the diversity of opinion that appears to exist on this important question, I should like to record what I have myself witnessed during the past eighteen months. By the kind permission of Surgeon-Major Lawrie, the Principal of the Hyderabad Medical School, I have been present at numerous and severe operations performed by that surgeon at the Afzul Gunj Hospital, and during this period I have never seen the slightest ill effects result from the administration of chloroform, though sometimes in abdominal operations the patient has been kept under the influence of the anæsthetic for from an hour and a half to two hours. It has

always been given by one of the native students of the school, either male or female, apparently with the greatest confidence and ease on their part, following the principle taught by Surgeon-Major Lawrie—namely, to concentrate the whole of their attention on the breathing of the patient, and not to pay the slightest regard to the heart or pulse. I understood that it had been clearly and satisfactorily proved by Dr. Lauder Brunton and the Hyderabad Commission that chloroform did not prove fatal by sudden stoppage of the heart; yet very little attention seems to have been paid to the addresses of Dr. Lauder Brunton or Professor Wood at the Berlin Medical Congress last August, when the views expressed by these gentlemen were distinctly opposed to each other. The profession in general are therefore left as far as ever from a sound and definite basis for the administration of chloroform.

I am, Sirs, yours truly,

P. R. GABBETT,
Surgeon-Major, Medical Staff.

Secunderabad, Deccan.

ABDOMINAL SURGERY.

To the Editors of THE LANCET.

SIRS,—There are an omission and a belief in Mr. Thornton's address to the Medical Society concerning which I ask permission to make a few remarks. Surely it is the duty of everyone who gives only a slight sketch of the history of Abdominal Surgery to mention the name of Dr. James Blundell. In 1823 he read before the Medico-Chirurgical Society (John Abernethy in the chair), a paper entitled "Physiological Observations and Experiments," in which he related the experiments he had made on rabbits with a view to the improvement of the surgery of the abdomen. The success of his operations on the rabbit led him to infer that moderate openings in the peritoneum will not prove fatal; and that "certain viscera or parts of viscera, not essential to the welfare of our structure, may be removed from the belly without necessarily, or even generally, producing death." He advised the division or removal of a portion of the Fallopian tube, the extirpation of the healthy ovaries and of ovarian cysts, the removal of the cancerous womb, the extirpation of the puerperal uterus, &c. The recommendations contained in his paper were so bold and novel that the Society thought it prudent not to print them in its Transactions. At that time, notwithstanding the arguments and remonstrances of its Editor, THE LANCET, as you well know, Sirs, was not allowed to report the proceedings of the Society, and any member giving details of the papers read for publication was liable to expulsion. Had Blundell not printed his communication privately, his labours and deductions, which are so creditable to this country, would have been lost. As he seems, therefore, to have had scant justice done him while alive, let us not ignore his claims upon our gratitude and withhold the honourable mention of his name now he is dead.

So much for the *omission*. The *belief* is of much less consequence. "I believe," says Mr. Thornton, "the electrical treatment of uterine fibro-myomata to be an utter and complete failure." Now for a method of treatment to be a failure completely and utterly it must have done no good in any one case. He cannot be ignorant of the numerous cases which have been published of the successful treatment of myomata by electricity. What must be his opinion of those who have published these cases? How far is Mr. Thornton's belief sound, and on what evidence is it based? We know nearly two years ago he wrote of Apostoli's method: "I have never tried it, and being a surgeon, do not intend to." He preferred the bloody to the bloodless operation, the dangerous to the safe. Fortunately, since that time he has become "more and more inclined to persevere with the administration of ergot and the use of the hot douche for prolonged periods before resorting to the knife." How is it that, "being a surgeon," he can use heat, and not electricity? This is a subtle distinction, almost beyond comprehension. The eye is apt to see what it wishes to see, and to Mr. Thornton's early disbelief in the electrical treatment of uterine tumours we must look for his present expression of opinion. Contrary to his belief, I confidently affirm that the more experience I have in this mode of treatment the more convinced I am of its efficacy. It will, in the majority of cases, cure symptomatically. The tumour is reduced in size, and hæmorrhage and pain are absolutely cured. If a patient can by electricity be made comfortable and useful, how can the operations of oöphorectomy and hysterectomy be conscientiously recommended? It is to be hoped that Mr. Thornton's treatment will continue to develop in a conservative direction, and that his belief will not retard the adoption of a valuable remedy.

I am, Sirs, faithfully yours,

JAMES H. AVELING.

Upper Wimpole-street, W., Nov. 9th, 1890.

A NEW LARYNGOSCOPIC LAMP.

To the Editors of THE LANCET.

SIRS,—I am glad to see that the importance of the lime-light illumination is being recognised for throat work, but I would point out that with the exception of the question of counterpoise and in two points of retrogression the lamp described by Dr. de Havilland Hall does not differ in principle or action from that which was constructed for me by Mr. E. G. Wood of Cheapside nearly eleven years ago, was shown by me at the International Congress of Laryngologists at Milan in 1880, is described and figured in my book, is in use by many physicians in this country, on the Continent, and in the United States, and is known by my name. This lamp is fixed on to the rack-movement apparatus for the ordinary Argand burner, which not only serves the purpose of elevation and depression, but in the event of oxygen or of lime being accidentally unavailable, common gas-illumination can at once be employed. Others have been constructed on pedestal stands for the convenience of portability. The points of retrogression and disadvantage in the lamp described by Dr. de Havilland Hall are: First, that according to the drawing, the diameter of the chamber is so small as to imperil by confined heat the safety of his lens; secondly, in the absence of the water bath, which on account of the heat is necessary for comfortable examination by reflected light—the only convenient method of illumination where operations have to be performed with its aid. I have only to add that no patent has been taken out for my apparatus, and from the full directions I have published concerning it, it can be manufactured by any mechanician.—I am, Sirs, yours faithfully,

LENNOX BROWNE.

Weymouth-street, Nov. 19th, 1890.

EUCALYPTUS OIL IN DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—Seeing accounts of the great prevalence of diphtheria at the present time in and around London, I wish to draw the attention of the profession to the great efficacy of eucalyptus oil in the treatment and prevention of this disease. By using it freely as an application, an inhalation, and a general disinfectant, it seems not only to have the power of checking the spread of the disease, but actually of killing the poison, and to all intents and purposes *curing* the patient in from twenty-four to forty-eight hours. It may seem a strong assertion to make, but I am confident that if it was generally and *sufficiently* used in all cases of diphtheria and scarlet fever, we should have very few deaths from either of these heretofore devastating diseases.

I have tried it in a fair number of cases of scarlatina, all with the same result, curing the patient almost at once, preventing its spread, and with no sequelæ; and also in all cases of diphtheria occurring in my practice. These latter, however, have not been very numerous, so that I should have preferred waiting until I had treated more cases before writing this, but am induced to do so by the present epidemic, feeling assured, from what I have already seen, of its almost certain success.

I will now give a short outline of my most recent case of diphtheria, which occurred last week. W. D——, aged five, was first seen last Friday, presenting a typical case of diphtheria. Temperature 102°; pulse over 130; the throat completely covered with diphtheritic membrane; had had no sleep the night before, being in a high state of delirium. I immediately commenced the treatment, painting the throat freely with a mixture of eucalyptus and olive oil, giving small doses of the former internally, sprinkling it about his shirt and bedclothes, and giving directions that he was to inhale some of the oil in vapour about every four hours. The

next day I saw him—less than twenty-four hours afterwards,—he was sitting up in bed playing. His temperature and pulse were almost normal; he had had a good night, with a fair amount of natural sleep and no delirium, and on examining the throat I found only a few patches of the membrane left. The following day the child, with the exception of a little debility, seemed perfectly well, and there was *absolutely* no appearance of any membrane on the fauces. He was out of bed, sitting by the fire and taking his food well. My father, Mr. J. B. Curgenven, wrote a letter to one of your contemporaries some months ago, giving the result of the use of eucalyptus in scarlatina, and also read a paper on the same subject before the Epidemiological Society, but I think it has been tried only by very few medical men. Seeing what marvellous results it has given, I cannot help being surprised that since then it has not been more extensively tried. Now that small-pox has lost its virulence, there is no disease more dreaded than diphtheria, and I verily believe that eucalyptus will be as valuable a remedy against diphtheria and scarlet fever as vaccination is against small-pox.—Hoping that I am not too far intruding on your valuable space,

I am, Sirs, yours truly,

J. SADLER CURGENVEN, M.R.C.S, L.R.C.P., L.S.A.

Craven-hill-gardens, W., Nov. 5th, 1890.

*** The remedy is not a new one in diphtheria; it was advocated by Professor Mosler eleven years ago, and has often been used by others. Nor can we think our correspondent's admittedly small experience justifies such conclusions as he draws from it.—ED. L.

ENTERIC FEVER IN INDIA.

To the Editors of THE LANCET.

SIRS,—The question of enteric fever in India is of scientific rather than statistical importance. In my endeavour to express a courteous dissent from the opinions of others I fell into an error which I did not foresee. Dr. Edward Squire in his generous and lenient criticism placed what I now see to be the most probable construction on the meaning of my words, but, nevertheless, one the very opposite to the view I intended to convey. I wrote that there were two varieties of enteric fever in India, or, I would prefer to say, enteric fever and enteroid fever. I made use of the word "enteroid" to imply that the disease in many respects resembled enteric fever. To have expressed my meaning correctly I ought to have written that the cases which are diagnosed as enteric fever are of two classes, one of which is indisputably enteric fever, whilst the other is not enteric fever at all. As a further development of the subject I would state my opinion that:—Enteric fever exists as in England; enteric fever exists as in England, but associated with malaria, and that this is the only fever to which the term "typho-malaria" is applicable. Remittent fever exists, which may be mistaken for enteric fever. A distinct disease exists which is sometimes called remittent, but more often enteric fever, but which is neither one nor the other. The main feature which distinguishes this last disease is the absence of any enlargement of the spleen unless the patient's constitution is impregnated with the poison of malaria, in which case the spleen is already enlarged.—I am, Sirs, your obedient servant,

G. SHERMAN BIGG, F.R.C.S. Ed.

Victoria-street, S.W., Nov. 16th, 1890.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Handsome Gift to the Newcastle College of Medicine.

I HEAR that Mr. Stephen Scott of Harrogate, formerly of Newcastle, has given the sum of £1000 to the Newcastle College of Medicine, in connexion with the University of Durham, for the purpose of founding a scholarship to promote the study of hernia and allied complaints, to be known as the "Stephen Scott Scholarship."

Sanitary Matters in Newcastle.

There is now a considerable amount of typhoid fever in Newcastle. Scarlet fever also has been largely notified. The number of fever cases at the Walker Hospital is also increasing. This is said to be in consequence of the hospital being looked upon with more favour, but I scarcely think that this expresses the whole truth. Mr. H. E. Armstrong, the medical officer of health, has made a useful contribution to the data relating to the erection of workmen's dwellings by compiling a series of answers to inquiries addressed to corporations which have entered upon the building of such dwellings. It appears the answers are satisfactory so far as showing that these dwellings are easily let and fully occupied, but it is also stated that the tenants are of a class which could easily find homes elsewhere. What is urgently wanted in Newcastle are rooms for the poorer classes of working people not able to pay more than five shillings a week.

The Typhoid Fever Epidemic on the Tees.

Dr. Barry, the Government Commissioner, has visited Middlesbrough in the course of his investigations into the present outbreak of typhoid fever on the Tees, which, however, is now abating. Dr. Barry, in company with Dr. Malcomson, has visited and inspected various parts of the town, and it is stated in the local papers that his report will not be issued before three months.

Cumberland Hospital Sunday Fund.

The Committee of the Cumberland Hospital Sunday Fund have issued their report, from which it appears that they have allocated £750 this year, as follows:—Cumberland Infirmary, Carlisle, £500; Carlisle Dispensary, Carlisle Fever Hospital, and Workington Infirmary, £50 each; and the Silloth Convalescent Institution, £160. The committee, in reference to some alterations in the system, assured those who had entrusted contributions to them that the greatest pains would be taken to allocate the money wisely.

Newcastle-on-Tyne, Nov. 26th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Physical Society of Edinburgh.

LAST week the session of this Society was opened by the retiring address of the Vice-President, Dr. G. Sims Woodhead. The lecturer took for his subject "Science and Physic." He referred to the early history of the Society, and the part the medical profession had taken in its establishment, and also the work of its meetings. After giving an account of the present condition of the Society, he proceeded to discuss the question of preventive inoculation and the views as to its mode of action. He also referred in detail to Koch's recent work, and the interesting effect of the inoculation in that instance, judging from the published account by Koch himself. At the close of the address a hearty vote of thanks was given to Dr. Woodhead, and much pleasure was manifested by the members in seeing him amongst them again.

The Morison Lectures.

The third and last of these lectures was delivered by Dr. Clouston in the Royal College of Physicians of Edinburgh, on Friday of last week. The lecturer dealt in the main with those affections which he regarded as allied to neurosis, and which occur during the period of development. The lectures have been well attended, and have been full of interest, although many of the views expressed are hardly likely to be accepted by practitioners in general.

Edinburgh Health Lectures.

Dr. George Mackay was the lecturer on Saturday last, and dealt with defects of vision, and drew special attention to the imperfect method of testing for colour-blindness by the Board of Trade and by the railway companies.

Health of Edinburgh.

The mortality last week was 89, and the death-rate 17 per 1000. Diseases of the chest caused 38 deaths, and zymotic diseases 6. The intimations for the week were 5 cases of typhoid, 15 of diphtheria, 24 of scarlatina, and 18 of measles.

The Lord Rectorship of the University of Aberdeen.

The polling for the election of a Lord Rector in room of Mr. Goschen, whose term of office has expired, took place at Marischal College on Saturday last. The result was that the Marquis of Huntly was elected by the votes of

three nations—viz., Mar, Buchan, and Angus. Mr. Bryce had a majority of five in the Moray nation. It may be well to explain what a "nation" means or consists of. The Mar nation consists of all matriculated students born within the city of Aberdeen and in the parishes in the immediate neighbourhood. The Buchan nation includes all students born within the county of Banff and within such part of the county of Aberdeen as is not included in the Mar nation. The Moray nation includes all matriculated students born within the counties north of the Buchan nation, including Orkney and Shetland. The Angus nation consists of matriculated students not included in any of the other nations. 849 students were entitled to vote, and 782 recorded their votes. Of the total number of votes, the Marquis of Huntly had a majority of 78. On the evening of the election the students held a torchlight procession in celebration of the event. The procession was a great success, but a very sad accident occurred at the close. A student had his eye pierced by the wire of a torch, and it was found necessary to enucleate the eyeball.

Dr. Koch's Treatment of Tuberculosis.

The excitement caused by the announcement of Dr. Koch's treatment of tuberculosis has reached Aberdeen. Dr. Macgregor, assistant physician to the Aberdeen Hospital for Sick Children, left for Berlin last Saturday. It was also announced in the local papers that Professor Hamilton intends going to Berlin to investigate the method and results of the supposed cure, and Dr. Wyness is also soon to leave, or has already left, for the German capital.

Health of the City of Aberdeen.

During last week 34 cases of zymotic diseases were reported to the medical officer of health, and of these 7 were cases of measles, 26 of scarlet fever, and 1 of diphtheria.

Nov. 25th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

Royal College of Surgeons: Biennial Presidency.

IT was thought by the majority of the Fellows that the vexed question of the two years' tenure of the presidential chair had been definitely settled, but it appears that we are as far off as ever from finality in the matter at issue. Mr. H. Gray Croly, President, will seek re-election in June, as intimated in April last in THE LANCET. At the same time, the announcement appeared that Messrs. Carte and Moore, candidates for the vice-presidency in June last, had agreed that whoever was elected would remain in office for two years for the purpose of establishing the biennial presidency. I am informed, however, that Mr. Carte, Vice-President, will be a candidate for the presidency of the College in June next.

Case of Acromegaly.

Mr. Joseph Redmond at a meeting of the Medical Section of the Royal Academy of Medicine last week read the notes and exhibited photographs and casts of a case of acromegaly, the first of the kind recorded in Ireland. The patient, a girl aged nineteen, was admitted into hospital complaining of great weakness and swelling of the hands, wrists, feet, and knees, her illness having commenced about a year since. The carpal ends of both the radius and ulna were considerably increased in size, and the heads of the tibia and fibula were also enlarged. The thyroid gland appeared to be absent. The average pulse-rate, respiration, and temperature during her stay in hospital were 100, 24, and 101·6° respectively.

Professor Koch's Treatment of Tuberculosis.

Several of our Dublin hospitals, notably St. Vincent's, Mater Misericordiæ, Richmond, &c., contemplate procuring the necessary appliances for carrying out the method advocated by Professor Koch. In some it is intended to reserve special wards for this treatment, so as to give it a thorough investigation, and to bring it within the reach of the poorer classes of the community.

Richmond District Lunatic Asylum.

A presentment for £17,246 for the maintenance of the Richmond Asylum was brought before Mr. Justice Johnson last week. The Corporation appeared by counsel, who pointed out that the Asylum was an enormous burden on the rates of the city, amounting to a total taxation of 7*d.* in the pound. The Corporation attributed this to the number of persons having no real domicile in Dublin who had been sent to the asylum. Mr. Justice Johnson said the matter was one of great importance, but as the law stood he was powerless to do anything in the matter.

The Entries at the Dublin Medical Schools.

The following is the official return of the anatomical entries for the present session, and which, compared with that for 1889, shows a decrease of fifty-seven students:—

	1889.	1890.	Decrease.
Royal College of Surgeons ..	285	243	42
Trinity College	231	221	10
Catholic University	119	114	5
Total	635	578	57

Presentation to Sir John Nugent, M.D.

This gentleman, late Inspector of Lunatic Asylums in Ireland, was on Tuesday the recipient of a service of plate, presented by the medical and other officers of lunatic asylums in Ireland. The plate consisted of five large solid silver bowls of the Monteith order, and are exact copies of the well-known punch bowls now on exhibition at the South Kensington Museum, and the property of the Exeter Corporation. They weigh 250 ounces, and are mounted on ebony stands. On the largest bowl is engraved the following:—"Presented to Sir John Nugent, M.B., Commissioner of Control and Inspector of Lunatic Asylums in Ireland, by physicians and other friends connected with these institutions, as a token of official respect and personal esteem on his retirement, at the close of forty-three years, from the public service, November, 1890."

The late Mr. T. E. Ryan bequeathed the munificent sum of £10,000 to the funds of the Royal Hospital for Incurables, Dublin.

Sir John T. Banks, K.C.B., has been appointed a High Sheriff for the county Monaghan for the ensuing year.

Nov. 25th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

White Corpuscles and the Bacillus of Anthrax.

AT the last meeting of the Academy of Sciences M. Phisalix read a paper on the result of experiments he had carried out with a view of demonstrating the action of white corpuscles as phagocytes on the bacillus of anthrax. He found that it was especially at the nearest ganglion to the point of inoculation that the effects were most marked and could be most easily studied. The animal inoculated lived or died at the end of a time varying from ten to seventy-two days. But in every case, whether the animal survived or succumbed, the microbe was not actually killed in the ganglion, for this when cultivated gave rise to an abundant proliferation. The blood, on the contrary, had lost completely all microbic tendencies, for all his cultures of blood proved to be sterile. From this series of experiments he concludes that the white corpuscles play an undoubted mechanical *rôle*, their chemical action being less easily demonstrated; but in any case this action alone would not suffice to destroy the microbe. He held rather that the protection of the organism resulted especially from the influence exercised by the blood or its products on the vitality of the bacillus.

Myxœdema treated by Thyroid-Grafting.

At the last meeting of the Medical Society the notes of a case in which M. Walther had operated in a case of myxœdema by grafting the thyroid of an animal were read. The operation was performed on Sept. 3rd, the patient being a woman of about forty. The grafting was performed under the right breast, and the immediate result of the operation was in itself good, for the wound healed by first intention. On Sept. 6th a troublesome menorrhagia completely ceased. This hæmorrhage had previously proved rebellious to all other treatment. The amelioration in the patient's general condition was not less striking. The puffiness of the face had slightly diminished, and the pseudo-lipomatous appearance was, on the whole, much less marked. But it was in the functional troubles which characterise the disease that the improvement was most

marked. Speech was much more clear, and the patient's walk had greatly improved.

Inoculation against Tuberculosis.

At the last meeting of the Biological Society M. Richet recorded the results of some experiments he had undertaken, in conjunction with M. Héricourt, on the intra-peritoneal transfusion of blood from a healthy to a diseased animal as a means of checking the development of tuberculosis. They had also undertaken another series of experiments with the same end in view, but the method of which was different. They injected into the peritoneum of a dog 50 c.c. of a very virulent tubercular culture, and then they abstracted 150 c.c. of blood from the animal, containing by this time the bacilli in evident quantities. This blood was inoculated or injected into three rabbits, which were next inoculated with the tubercle culture above mentioned. These animals survived, whereas two which had not been previously inoculated with the blood died.

Typhoid Fever at Caen.

Dr. Brouardel has reported on the typhoid outbreak in the garrison at Caen, and has ascertained that the epidemic was due to the use of wells contaminated by sewage. He states that during the last sixteen years the disease has caused 154 deaths in the garrison. Founded upon this report, the Minister of the Interior has framed a measure conferring upon the municipality the power to prohibit the use of water from contaminated wells—a power which it had not previously possessed.

The University Question.

A committee appointed by the French Senate to examine the Government Bill dealing with the University question has recommended that three instead of four faculties shall be necessary to constitute a university; also that a medical school of the second class (*école de pleine exercise*) be accepted, instead of requiring, as proposed, that all Universities must possess a faculty or first-class medical school.

Paris, Nov. 25th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Dr. Graf's Question to the Prussian Government.

THE question which the Privy Councillor of Health, Dr. Graf of Elberfeld, will address to the Prussian Government in the House of Deputies to-morrow or on Thursday, will be worded thus: "What steps does the Government intend to take with a view to the furtherance and further utilisation of Koch's specific?" The somewhat odd expression "furtherance" probably means improvement. All the parties, each represented by six members, have signed this interpellation, and there is no doubt that it will be welcome to the Government, which will gladly avail itself of the opportunity to announce to the country the deep pride and satisfaction with which it rejoices in the fact that the winner of this great victory over one of the cruellest and most formidable of the enemies of mankind is a German and a Prussian. Minister von Gossler's answer is expected with keen interest.

Surgeon-Major Dr. Koehler on Koch's Remedy.

Surgeon-Major Dr. Koehler of the Berlin Charité reported yesterday evening at the German Society for the Promotion of the Public Health on the results he has gained by Koch's method. Dr. Koehler's experience is confined to tuberculosis of the skin and the joints, and extends over six weeks. He showed about ten of his patients, most of whom have been suffering from lupus, some from tuberculous scars, and others from tuberculosis of the joints. He advised his hearers not to inject Koch's fluid in cases of local tuberculosis near the diseased part, but always in the skin of the back between the shoulder-blades. He recommended the use of gauged syringes, to obviate the danger of administering too large a dose. He advised the introduction of a normal solution of Koch's fluid, by preference 1 per cent. Of the accessory symptoms observed by him after the injection, he mentioned especially eruptions mostly very similar to that of scarlet fever, more rarely to that of miliary fever, and also yellowish discolouration of the skin. Once he observed along with these symptoms inflammation of the cornea and of the conjunctiva. He emphasised the necessity of distinguishing between superficial and deeper lying lupus. In the latter case Koch's method must be supplemented by the surgical removal of the dead tuberculous tissues. In certain cases of tuberculosis of the joints resection would be necessary just as hitherto. In general, Dr. Koehler insisted with emphasis that Koch's method, far from rendering the surgeon's help superfluous, only renders it easier and more effective. Even if the bacilli lost their virulence in the necrotic tissues, even if they got encapsuled in their foci, a push or a blow sometimes sufficed to bring on tuberculosis again. In one of his cases of tuberculosis of a joint abscesses had formed, and, on their being opened, necrotic tissue had come out in the form of clots. The examination of these clots, which was not yet ended, would perhaps throw some light on the question how Koch's fluid affects tuberculous tissue. In conclusion he summed up as follows: "It is certain that Koch's remedy renders it possible to recognise surgical tuberculosis even in the very first stages, and in cases in which it was not recognised before. It is quite decisive in cases in which other diseases appear with symptoms identical with or quite similar to those of tuberculosis. Even if the exaggerated expectations which are cherished, especially outside medical circles, be disappointed, Koch's discovery, regarded from the purely scientific and therapeutic point of view, is nevertheless to be characterised as one of the most important in the whole history of medicine."

The Berlin Medical Society will appoint Professor Koch one of its honorary members to-morrow. His promised lecture is postponed. It is said that his search for a remedy for diphtheria is well advanced.

Duke Carl Theodor of Bavaria, who is well known as an ophthalmic surgeon, left Munich for Berlin yesterday, to visit Koch.

In medical circles neither oral nor written communications are expected from Koch for months to come. A hundred and fifty beds have been placed at his disposal in the city hospital in Moabit, a district in the north-west of Berlin, to enable him to continue his therapeutic experiments against other infectious diseases. Professor Brieger is to assist him in these experiments.

Berlin, Nov. 25th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Koch's Remedy for Tuberculosis.

THE experiments with Professor Koch's remedy were commenced here last week at the Poliklinik and at Professor Neumann's clinic for skin diseases at the General Hospital. The Poliklinik was provided with the lymph by Professor Schnitzler. Patients of Dr. Hebra, suffering from lupus, as well as cases of vertebral caries and pulmonary phthisis, were injected with the fluid. The effect of the injections has been as well marked in the cases of lupus observed here as in those reported by the Berlin physicians, but in the cases of caries the reaction after the injection of the liquid, containing only one milligramme of the active principle, has been very slight. In the case of recent pulmonary phthisis the observations made by Fraentzel were confirmed, even to the extent of the behaviour of the bacilli in the sputum. The bacilli showed the changes described and illustrated by the above-mentioned author in the last number of the *Deutsche Medicinische Wochenschrift*. More interesting were the experiments made at Professor Neumann's clinic, where a young man aged eighteen was subjected to Koch's treatment by Dr. Emerich Ullmann. The patient was suffering from extensive lupus serpiginosus on the right leg and in the left frontal region, which showed the now well-known specific reaction after the injections of Koch's preparation. The body of this patient was, moreover, the seat of a lichen scrophulosorum, the eruption of which showed also a peculiar reaction against the injected liquid, as its single efflorescence showed swelling, followed by an accumulation of pus, and finally desquamation. Therefore, it would seem that this form of lichen was a disease closely allied with lupus and tuberculosis of the skin, though the kinship of these processes has not yet been demonstrated by bacteriologists.

Chemical Analysis of the Fluid.

To-day a small quantity of Koch's remedy provided by

Professor Schnitzler has been subjected in my presence to a preliminary chemical examination at the private laboratory of Dr. Jolles, and the following results have been obtained. It is a syrupy, slightly foaming liquid of brown colour, its aqueous solutions showing a greenish fluorescence. In odour it resembles elder yeast or leaven combined with a sweet aromatic admixture such as honey. If slowly heated the smell of yeast gives way to an agreeable odour resembling fruits; on further heating the smell becomes like that of fresh bread crust, but without the acid character of fruit. If the heating of the substance is continued the smell assumes the empyreumatic character of that exhibited by burning albuminous matter and carbonising horny substances. Only an extremely small quantity of ash (under 1 per cent.) was obtained. The liquid shows a neutral reaction. Some of the liquid was diluted with water and subjected to various tests. By adding diluted acetic acid it becomes slightly opaque, by which the presence of a small quantity of mucin is indicated; by further adding potassium ferrocyanide the opacity of the liquid is increased, showing the presence of albumen; but this reaction is too feeble to indicate the amount of the active principles in the lymph. On the other hand, the biuret reaction characteristic of peptones is very strongly marked. The tests for cyanogen compounds gave perfectly negative results, and the assumption that Koch has been using cyanides of gold or prussic acid seems therefore completely erroneous, as no metals could be detected in the liquid. Traces of reduction were observed after treating the liquid with Fehling's solution, but the presence of sugar among the reducing substances could not be confirmed. Sulphur and phosphorus in an organic form proved to be absent. As only a small quantity of the lymph could be used for chemical examination, it was impossible to shake the liquid with ether and alcohol for the purpose of separating the alkaloids, if present, from the albuminoids, but the reagents which reveal the presence of alkaloids and ptomaines even when mixed with albuminoids—e.g., acid bichromate of potassium—failed to give a reaction, so that the absence of alkaloids and ptomaines may be taken for granted. It seems, therefore, that, besides the peptones, the principal active substances contained in Koch's lymph belong to that not yet chemically defined class of the protein bodies called toxalbumens, globulins, or enzymes, which play such an important *rôle* in all fermentative processes, from the chemical changes produced by common yeast in the products of the vegetable kingdom up to the coagulation of the blood in animals.

Vienna, Nov. 27th.

Obituary.

DR. H J. BIGELOW.

BY the death of Dr. H. J. Bigelow, which we briefly recorded last week, America has lost one of her most distinguished surgeons, and a man who has left an indelible mark on the progress of the science and art of surgery. He died at a ripe age, and for several years had retired from active practice. Latterly he had devoted attention to other branches of science than surgery, and had not paid a visit to Europe, as was his habit, for many years. By many of us his handsome person, his courtly manner, and his enthusiasm will never be forgotten, and we shall feel that one tie with our professional colleagues in America is snapped now that Dr. Bigelow is with them no more. For many years he was not only surgeon to the Massachusetts General Hospital and Professor of Surgery in Harvard University, but a ruling spirit in both of these great institutions, and his counsels largely controlled their course. In the University he was for many years a colleague of Dr. Oliver Wendell Holmes, and between the Professors of Anatomy and Surgery there was a very close personal friendship. In the hospital he was associated with the Warrens—father and son,—Homans, and many other surgeons and physicians of great fame. Himself possessed of ample private means, he was able to give full scope to his strong taste for research and for the application of mechanical principles to surgical methods. In this field he reaped a rich harvest, and particularly in two directions. The first work which brought him European fame was a *brochure* on the hip-joint, in which he described what is now always called by the name he gave it—the Y-ligament. He also pointed out the influence this ligament has in determining the position of the femur when the caput femoris is dislocated, and that relaxation of this ligament is the key to reduction of a dislocation of the hip by manipulation. This book contains accurate descriptions of the common and the rarer forms of hip dislocations, with simple and clear directions for their reduction by gentle manipulations instead of by brute force, the method at that time universally employed. His statements as to the ease with which reduction could be effected by properly directed movements seemed incredible to those who had witnessed the great difficulty often met with when extension by pulleys was resorted to. But experience has borne out all Dr. Bigelow's assertions: the pulleys have become obsolete, and the surgeon approaches a case of recent dislocation of the hip with as much, if not more, confidence in his power of quickly and easily reducing it as he does that of a finger. Dr. Bigelow devoted some years to the investigation of which this has been the outcome; by it he effected a revolution in this branch of surgery which will always take a high place among the many brilliant surgical achievements of the latter half of the nineteenth century. Of late years his name has been more associated with the operation of lithotrity. To him belongs the credit of greatly widening the scope of this operation, and at the same time of largely lessening its danger and shortening the duration of the treatment. He was the first to grasp the importance of two great facts, and to deal adequately with them. These facts are, first, the ease and safety with which much larger instruments than those then in general use can be passed along the urethra; and, secondly, that one chief danger and drawback in Civiale's operation was the leaving behind in the bladder sharp fragments of stone to be passed in the stream of urine. He therefore enlarged and strengthened the lithotrite, enabling it to crush larger stones, and after crushing he extracted the fragments by means of large tubes and a powerful evacuator. He demonstrated that the bladder and urethra could stand even very prolonged use of these instruments without serious ill results, and he advocated his method as a universal substitute for the repeated short sittings then in vogue. As before, his statements were received with incredulity, not to say ridicule, and the discussion for a time waxed hot, but we need only add that with Bigelow lay all the honours of it, and that to him belongs the undivided credit of having developed the operation of lithotrity to its present perfection. It is true that others knew of the great extensibility of the urethra, and some may have suspected its tolerance of prolonged instrumentation, while Crampton and Clover had made feeble and largely ineffectual efforts to extract the débris after crushing. It was Bigelow, however, who grasped the idea of "lithotrity at one sitting," or complete evacuation of a calculus at once, as generally applicable, and to him belongs the credit of the one great advance in this operation made since the days of Civiale. Bigelow's name will always be associated with these two operations, and to have added so largely as he did to the simplicity and safety of grave surgical procedures falls to the lot of very few men. When last the present writer saw him, he was busily engaged in studying ants, and his house in Beacon-street, Boston, was largely given over to colonies of these insects. He had devoted a good deal of study to Japanese art, but in this he was followed and out-distanced by his son. Dr. Bigelow's early life was darkened by a great sorrow, but he found much happiness in his constant activity and in the remarkable success that attended his researches.

ARTHUR FERGUSSON McGILL, F.R.C.S. ENG.

WE regret to have to record the death, at Harrogate, on the 21st inst., of this distinguished surgeon at the early age of forty-four. Mr. McGill was the son of Dr. William McGill, and was born at Cartmel in Lancashire in 1846. His father took his medical degree at the University of Edinburgh, but never practised his profession; he was a fellow student with, and a personal friend of, the late Sir William Fergusson, who subsequently became Mr. McGill's godfather, and hence he received the name of Fergusson. He was educated, like his brothers, at Tonbridge School, and, having matriculated at the University of London, entered the medical department of King's College in October, 1864, obtaining a Warneford Entrance Scholarship. In 1866 he passed the

Preliminary Scientific M.B. Examination, with honours in chemistry and natural philosophy, and in 1867 the Intermediate M.B.; but he never went further in his university career, and in the next year qualified as M.R.C.S., and became assistant house physician at King's College Hospital. In 1869 he became a licentiate of the Apothecaries' Society, and filled the office of house surgeon to the hospital with conspicuous surgical ability and success. At the end of his term of office in 1869 he was appointed resident medical officer to the Leeds General Infirmary, and retained that office for three years and a half. His work was so well appreciated that on his resignation the committee—a most unusual proceeding—gave him a gratuity of £50, and, on his recommendation, divided the duties between a resident medical and a resident surgical officer. He then decided on continuing his surgical career at Leeds, and so in 1874 he became a F.R.C.S., and was at once attached as a Demonstrator of Anatomy to the Leeds School of Medicine, at which he afterwards lectured on Pathology. He was soon elected one of the honorary surgeons of the Leeds Public Dispensary, and he then published in THE LANCET the history of the treatment of a case of large subclavian aneurysm by galvano-puncture, which temporarily seemed successful, but pulsation having returned in the sac, he ligatured the first part of the left subclavian artery in the thorax. The patient unfortunately died of pleurisy, but the account of the reasons which induced Mr. McGill to undertake this formidable operation and the manner in which he performed it (Med.-Chir. Transactions, 1875) marked him out at once as an able surgeon of great original power, and one well worthy of being added to the brilliant men who have made the surgical school of Leeds world-renowned. In 1882 he was appointed the first honorary assistant surgeon to the Leeds General Infirmary; and in 1884, on the retirement of Mr. Wheelhouse and Mr. Pridgin Teale, he was made full surgeon, and the reputation of the Leeds Infirmary as a school of practical surgery has been ably maintained by him. He never shrank from performing any operation, however severe, provided he thought that such a procedure would be beneficial to the patient; but he brought to bear on every case the advantages of a cautious diagnosis, a great—perhaps almost unique at his years—surgical experience, able manipulative skill, and every care in the technique of after-treatment, so that his success in operative surgery was very marked. During the past four or five years, since supra-pubic cystotomy has been revived, he has originated, and with marked success performed, supra-pubic prostatectomy, and his papers on this subject, read at the Clinical Society and at the Leeds Medical Congress last year, and the specimens illustrating the value of the operation in some cases of enlarged prostate, which were on view in the museum during the Congress, constituted one of the most novel and interesting surgical features of the meeting. It is only four weeks since Mr. McGill read a paper before the Medical Society of London, giving the details of a new operation (supra-pubic) for closing severe vesico-vaginal fistulæ, which he had recently performed with success, and many of his London friends then noticed that his health was very seriously impaired, although he was in as good spirits as usual. He was elected Professor of Anatomy in the Yorkshire College of Science when the Leeds School of Medicine was merged into that institution, and at the time of his death was Professor of Surgery in the College, and one of the internal examiners in surgery at the Victoria University. His teaching was conspicuous for its directness and simplicity, and he was extremely popular with his pupils, as well as with his friends and patients, who valued his professional enthusiasm, his devotion to work, and the transparent honesty and singlemindedness of his character. In 1888 he was elected an Honorary Fellow of King's College, and we may add that he was an active Freemason. In his earlier years he had suffered from asthma, but of late the attacks were very few and far between. In the summer of 1886 symptoms of diabetes, before undecided, became only too certain. He knew that the disease would probably run a rapid course, as his mother and a brother had died from the same malady; notwithstanding, he resolved to steadily continue his work until the end should come, merely removing his residence to Harrogate, and going daily into Leeds for his consulting and hospital duties. During the past year an elder brother, who had been ill for some time at his house, died from phthisis, and the worry and anxiety incumbent thereon doubtless hastened his own death. He began to suffer anew from great thirst, and his emaciation and weakness increased rapidly. On the 18th inst. he saw a patient at Goole; on the 19th he was unable to leave his bed; on the 20th he became comatose, and remained unconscious until his death, which took place on the night of the 21st. He was buried at Harrogate on Wednesday, the 26th. He was unmarried, but leaves a brother and sister to mourn their loss, and to their grief will be added that of everyone who has had the advantage of a personal acquaintance with Mr. McGill's life and character.—J. C.

THE SERVICES.

ARMY MEDICAL STAFF.—Surgeon-General Thos. Tarrant, M.D., has been placed on retired pay (dated Nov. 13th, 1890).

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Surgeon Geo. A. Holroyd to the *Raleigh* (dated Nov. 22nd, 1890); Mr. William B. Macdonald to be Surgeon and Agent at Dunbar; Staff Surgeon Edward Elphinstone Mahon has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet (dated Nov. 16th, 1890).

ARMY MEDICAL RESERVE OF OFFICERS.—The services of Surgeon John Joseph Ardavon Vincent Constantine Raye having been dispensed with in the 1st London (City of London) Artillery Volunteer Corps, he ceases to be an Officer of the Army Medical Reserve (dated Nov. 26th, 1890); Acting Surgeon Richard Reginald Sleman, 20th Middlesex Rifle Volunteer Corps, to be Surgeon, ranking as Captain (dated Nov. 26th, 1890).

VOLUNTEER CORPS.—*Artillery:* 1st Hampshire (Southern Division, Royal Artillery): Surgeon A. F. Turner (Surgeon-Major, half-pay) resigns his commission (dated Nov. 22nd, 1890).—2nd Glamorganshire: John Hugh Rees, M.D., to be Acting Surgeon (dated Nov. 22nd, 1890).—*Rifle:* 6th Volunteer Battalion, the Royal Scots (Lothian Regiment): Acting Surgeon J. Cameron, M.D., to be Surgeon (dated Nov. 22nd, 1890).—3rd Volunteer Battalion, the Royal Fusiliers (City of London Regiment): Surgeon I. G. Butters resigns his commission (dated Nov. 22nd, 1890).—3rd Volunteer Battalion, the Prince Albert's (Somersetshire Light Infantry): Surgeon and Honorary Surgeon-Major W. H. G. Phelps, M.D., is granted the rank of Surgeon-Major, ranking as Lieutenant-Colonel (dated Nov. 22nd, 1890).—1st Lanarkshire: Surgeon-Major (ranking as Major) J. W. Anderson, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement (dated Nov. 22nd, 1890).—1st Middlesex (Victoria): Surgeon and Surgeon-Major W. G. Shepherd, M.D. (ranking as Lieutenant-Colonel) resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement (dated Nov. 22nd, 1890).

VOLUNTEER MEDICAL STAFF CORPS.—Maidstone Division: Acting Surgeon John Grant, M.B. to be Surgeon (dated Nov. 22nd, 1890).

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on November 25th, 1890.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	290	48	..	75	5	418	442
North-Western Hospital	325	38	..	20	1	384	443
Western "	191*	21	..	17	2	231	262
South-Western "	255	..	..	..	..	255	340
South-Eastern "	273	42	1	57	1	374	461
Northern "	431	30	..	29	..	490	480
Gore Farm "	229	..	..	..	..	229	300
Totals	1994	179	1	198	9	2381	2729

* 1 infant and mother.

SMALL-POX.—*Atlas* hospital ship, 1.

Medical News.

MEDICAL MAYORS.—In our last week's issue we inadvertently omitted the name of Ptolemy S. H. Colmer, M.D., who has been elected Mayor of Yeovil for the third time.

COVENTRY AND WARWICKSHIRE HOSPITAL.—The forty-ninth annual meeting of the friends of this charity was held on the 24th inst., and the report presented was of a gratifying character. The number of patients, both in-door and out-door, had increased during the past year, and the income had more than balanced the expenditure. Steps had been taken to increase the amount of accommodation for the nurses.

SUDDEN DEATH OF A MEDICAL MAN.—Mr. Edwin Douglas, physician and surgeon, Morpeth, was found dead in his bed on the morning of the 25th inst. It is currently reported in the town that he had been suffering from sleeplessness for some time, consequent upon broken nights, and had probably taken a sleeping-draught before retiring to rest. The deceased was the son of Mr. David Douglas, the well-known publisher in Edinburgh.

REGULATION OF OVERHEAD WIRES.—The London County Council has prepared a Bill to deal with the subject of overhead wires in the coming session of Parliament, by the provision of which the Council may provide subways and compel all companies or others owning wires to remove the same from overhead and carry them underground, either in their own subways or the subways of the Council, who will have authority to make a rental charge.

DEATH OF LADY ROSEBERY'S NURSE. — Miss Helen Neville, one of Lady Rosebery's nurses, has succumbed to the deadly fever which proved fatal to her ladyship. It seems that Miss Neville entered the Fever Hospital, Edinburgh, on the 5th inst., and died on the 25th inst. The death has proved a severe blow to the members of the Victoria Jubilee Institute for Nurses, who speak very highly of Miss Neville.

THE COUNCIL OF THE ROYAL COLLEGE OF VETERINARY SURGEONS.—Professor McCall of Glasgow presided over a meeting of this Council, for the purpose of considering the desirability of voting a sum of money out of the funds of the College towards a scientific investigation into the curative treatment of tuberculosis in animals according to the method discovered by Dr. Koch of Berlin. A sum of £250 as a first instalment was voted by the Council, and a committee of the College was appointed to choose a gentleman to act as its representative in the matter at Berlin, if necessary.

EXTENSION OF WEST BROMWICH HOSPITAL.—In a few days the board of management of this hospital will issue an appeal to the public for funds to enable them to carry out the following resolution passed by the governors at the last annual meeting—namely: "That the recommendation of the subcommittee with regard to the purchase of the piece of land in Lodge-road, with a view to the future requirements of the hospital, be approved, and the board be authorised to purchase the same, and to take such steps for the extension of the hospital as may be considered by the board to be necessary."

FOOTBALL CASUALTIES.—On Saturday, a player in a match between Derby and the St. Werburgh's team fractured his leg.—During a match at Holbeck Moor, between the St. Albans and Victoria Trinity Clubs, a youth named Armitage received a severe injury, producing internal hæmorrhage and causing death, and which a post-mortem examination showed was caused by the intestine being ruptured. Whilst playing in a match at Woodlesford for Buslingthorpe Nelson against Woodlesford Hornets, a youth injured his leg; a large abscess on the right knee-joint ensued, and resulted in death from blood-poisoning.—At Grantham, in a match between the Reserve of the Town Club and the Great Northern Railway Locomotive Department, a player sustained a fractured collar-bone.—During the All-Ireland Hurling and Football Championships, which were played at Dublin last week, eight of the Cork players were wounded, four of them seriously.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ANSON, G. E., M.A., M.D., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Skin Department to St. Thomas's Hospital.

BEHRENDT, M. R. I., L.R.C.P., L.R.C.S. Edin., has been appointed Deputy Medical Officer for the Cowingham District of the Gainsborough Union.

BODY, H. M., M.R.C.S., has been reappointed Medical Officer of Health for the Crediton Urban District, and Crediton and South Molton Rural Districts.

BOUSTEAD, R. JOS., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer of Health for the Rural Sanitary District of the Hexham Union.

BRISTOWE, H. C., M.B. Lond., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Eye Department to St. Thomas's Hospital.

BRUCE, WM., M.D. Aberd., L.R.C.S. Edin., has been appointed Medical Officer of Health for the County of Ross and Cromarty.

CAGNEY, JAMES, M.A., M.D., M.Ch., M.A.O. Roy. Univ., has been appointed Electro-therapeutical Officer to St. Mary's Hospital.

CARSTAIRS, H. J., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Throat Department to St. Thomas's Hospital.

COOPER, H. J., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been reappointed Non-resident House Physician to St. Thomas's Hospital.

COPE, ALBERT E., M.B., B.S. Dunelm, M.B. Lond., has been appointed Resident Medical Officer to the Western Dispensary, Rochester-row, S.W.

DAWSON, R. H., M.R.C.S., has been appointed Deputy Medical Officer for the Newton-on-Trent District of the Gainsborough Union.

DEWAR, JOHN, M.B., C.M. Glasg., has been appointed Medical Officer and Public Vaccinator for the Parish of Portree, Isle of Skye, vice Thackwell.

DICKSON, JOS. HENRY, M.B., C.M. Glasg., has been appointed Medical Officer for the Whitehaven District of the Whitehaven Union.

FALKINER, N. MCINTIRE, M.B., B.Ch. Dub., has been appointed Resident Medical Officer to the Monkstown Hospital.

FITZGERALD, M. E., L.K.Q.C.P., L.R.C.S. Irel., has been appointed Government Medical Officer at Thargomindah, Queensland.

FORWARD, F. E., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Eye Department to St. Thomas's Hospital.

FRY, JOHN F., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the No. 1 District of the Shepton Mallet Union, vice B. N. Hyatt.

GASTER, A., M.D. Bucharest, L.R.C.P. Lond., has been appointed House Physician to the City of London Hospital for Diseases of the Chest, Victoria-park.

GRANT, JOHN, M.B., C.M. Edin., Acting Surgeon 5th (Maidstone) Div. Volunteer Medical Staff Corps, has been appointed Surgeon.

GRIFFITH, W. S., M.A. Cantab., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Skin Department to St. Thomas's Hospital.

HADLEY, W. J., M.D. Durh., F.R.C.S., M.R.C.P., has been appointed Pathologist to the City of London Hospital for Diseases of the Chest, Victoria-park, vice Dr. Armand Ruffer, resigned.

HARDY, CHAS. M., M.B. Durh., has been appointed Medical Officer for the Herghington District of the Darlington Union, vice J. G. Hardy, resigned.

HARPER, J. R., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric Clerk to St. Thomas's Hospital.

HARRISON, J. H. H., L.R.C.P. Lond., M.R.C.S., has been appointed District Magistrate and District Surgeon in Her Majesty's Colonial Service.

HEARD, ROBERT LYNN, M.B., B.Ch., B.A.O. Dip. San. Sci., Roy. Univ. Irel., has been appointed Clinical Clerk and Extern Assistant to the Rotunda Hospital, Dublin.

HYATT, JAMES T., M.R.C.S., L.R.C.P. Edin., has been appointed Medical Officer for the Workhouse, Shepton Mallet.

JARDINE, ROBERT, M.D. Edin., M.R.C.S., has been appointed Assistant Surgeon to the Glasgow Cancer Hospital.

JOHNSON, RAYMOND, M.B., B.S. Lond., F.R.C.S. Eng., has been appointed Assistant Surgeon in charge of Out-patients to the Victoria Hospital for Sick Children, Chelsea.

JOHNSTON, J., M.B., C.M., has been temporarily appointed Medical Officer of Williamstown, Victoria.

KING, A., L.R.C.P., M.R.C.S., has been appointed Resident House Physician to St. Thomas's Hospital.

LAKE, C. LEONARD, M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer at the Ida Convalescent Hospital, Leeds.

LANKESTER, A. C., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

LISTON, HENRY, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer to the Townships of Southwick and Hylton, Sunderland Union; also Surgeon to the Roker Division of the Sunderland Volunteer Life Brigade.

LOW, H., M.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been appointed Resident Accoucheur to St. Thomas's Hospital.

LYONS, ALGERNON WILSON, M.B., L.R.C.P. Lond., M.R.C.S., of King's College, London, has been appointed Resident Clinical Assistant to the City of London Lunatic Asylum, near Dartford.

MARVIN, H. F. C., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer to the Whitechapel Union Infirmary.

MERCER, FREDERIC, L.K.Q.C.P. & L.M. Irel., has been appointed Medical Officer for the Fourth District of the Ongar Union, vice E. Clarkson, resigned.

MILLAR, W. H., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Throat Department to St. Thomas's Hospital.

MILL, WILLIAM, L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Second District of the Shepton Mallet Union.

MORRIS, PRYCE J. L., M.R.C.S., L.R.C.P. Edin., has been appointed Medical Officer for the Workhouse of the Blything Union, Halesworth, vice Warwick.

NIX, H. W., B.A. Cantab., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

PAYNE, H., L.R.C.P. Edin., M.R.C.S., has been appointed Vaccination Officer for the Derby Union.

ROUILLARD, L. A. J., M.B., B.C.Cantab., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

SAYRES, A. W. F., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Ear Department to St. Thomas's Hospital.

SHEARER, D. F., B.A., B.M., B.Ch. Oxon., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

SHONE, WM. V., L.R.C.P. Lond., M.R.C.S., has been appointed a Public Vaccinator in South Australia.

SMYTH, W. J., M.A., M.D., has been appointed Physician to the London Assurance Corporation for Southport and West Lancashire, vice Dr. Geo. Knapton, resigned.

SNOOK, S. P., M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to the London Hospital.

SOUTER, JOHN F., M.B., C.M. Aberd., has been appointed Government Medical Officer and Vaccinator for the District of Hillston, New South Wales, vice C. H. J. Souter, resigned.

STABB, A. F., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

UMNEY, W. F., L.R.C.P., M.R.C.S., has been appointed Resident House Physician to St. Thomas's Hospital.

WARD, ERNEST, M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Royal Berks Hospital, Reading, vice Firth, resigned.

WARE, E. E., L.R.C.P., M.R.C.S., has been reappointed House Surgeon to St. Thomas's Hospital.

WICKHAM, CATHERINE MARY, L.R.C.P., L.R.C.S. Edin., has been appointed Resident Medical Officer to Dr. Barnardo's Home for Children, Hawkhurst, Kent.

WICKHAM, G. H., B.A., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been reappointed Non-resident House Physician to St. Thomas's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BOLTON INFIRMARY AND DISPENSARY.—Senior House Surgeon. Salary £120 per annum, increasing £10 per annum to £150, with furnished apartments, board, and attendance.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Dispenser. Salary £100 per annum, with dinner and tea.

CHILDREN'S HOSPITAL, Birmingham.—Assistant Resident Medical Officer. Salary £40 per annum, with board, washing, and attendance.

DENBIGHSHIRE INFIRMARY, Denbigh.—House Surgeon. Salary to commence at £85 per annum, with board, residence, and washing in the house.

EAST LONDON HOSPITAL FOR CHILDREN, Shadwell.—Secretary. Salary £250. (Apply by letter to Mr. Cheston, Chairman of the Hospital, 1, Great Winchester-street, E.C.)

EAST RIDING ASYLUM, Beverley.—Assistant Medical Officer. Salary £100 per annum, with board, lodging, and washing.

GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN, Vincent-square, S.W.—Assistant Physician.

GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN, Vincent-square, S.W.—Chloroformist.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Resident Medical Officer as House Surgeon for one year. Salary £50 per annum, with board and residence in the Hospital.

LONDON HOSPITAL, Whitechapel-road, E. — Surgical Registrarship. Salary £100 a year.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Senior Resident Medical Officer for six months. Salary £60 per annum, with apartments, board, and washing.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer for six months. Salary £30 per annum, with apartments, board, and washing.

ROYAL BERKS HOSPITAL, Reading.—Assistant House Surgeon. Salary £40 per annum, with board and lodging.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—House Physician for six months. Salary at the rate of £40 per annum, with board and lodging.

SMEDLEY'S HYDROPATHIC ESTABLISHMENT, Matlock.—Resident Junior Physician for two years, with honorarium of 100 guineas the first, and salary of £200 for second year, board and residence included.

STAFFORDSHIRE COUNTY LUNATIC ASYLUM, Stafford.—Junior Assistant Medical Officer. Salary to commence at £100 per annum, with furnished apartments, board, and attendance.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, Leicester-square, London.—Honorary Assistant Physician.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W. House Surgeon to the In-patients of the Hospital. Honorarium of £50 per annum, with board and lodging in the hospital.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W. House Physician to the In-patients of the Hospital. Honorarium of £50 per annum, with board and lodging in the Hospital.

WESTERN DISPENSARY, Rochester-row, Westminster, S.W.—Attending Medical Officer.

Births, Marriages, and Deaths.

BIRTHS.

COLQUHOUN.—On Nov. 22nd, at Glenavon, Stoke Newington-common, the wife of W. B. Colquhoun, L.R.C.P.Lond., of a son.

COWAN.—On Nov. 12th, at 23, Standisbgate, Wigan, the wife of Richard Hamilton Cowan, M.R.C.S., L.S.A., of a son.

LLEWELLYN.—On Nov. 23rd, at Stoke Courcy, Bridgwater, the wife of John Llewellyn, M.R.C.S., of a daughter.

LLOYD-WILLIAMS.—On Nov. 20th, at James-street, Buckingham-gate, S.W., the wife of E. Lloyd-Williams, M.R.C.S., L.R.C.P. Lond., L.D.S., of a son.

MAC DONOGH.—On Nov. 22nd, at Twickenham, the wife of William Frederick Mac Donogh, M.D., of a daughter.

NEALE.—On Nov. 25th, at London-road, Leicester, the wife of J. Headley Neale, M.B., M.R.C.P., of a son.

SUTTON.—On Nov. 23rd, at Ingleside, Pontesbury, Salop, the wife of A. M. Sutton, M.B.Lond., M.R.C.S., of a daughter.

THOMAS.—On Nov. 22nd, at Sparkford Lodge, Winchester, the wife of G. Harley Thomas, F.R.C.S.E., Army Medical Staff, of a daughter.

WALLACE.—On Nov. 25th, the wife of Thos. Wallace, M.D., Cardiff, of a daughter.

MARRIAGES.

ASHFORD—HOUSTON.—On Nov. 18th, at St. John's, Kilburn, Claude Henry Ashford, M.R.C.S., L.R.C.P., second son of the late P. S. Ashford, Esq., of Alfred-place, Plymouth, to Ellena Mary, daughter of the late J. Houston, Esq.

CLARKSON—DAWSON.—On Nov. 18th, at Elstree Parish Church, Surgeon-Major John W. Clarkson, Indian Medical Service, eldest son of Major-General J. P. Clarkson, Bengal Army, deceased, to Eva, only daughter of Osborne E. Dawson, of Palmers, Elstree.

GREIG—HENDRIE.—On Nov. 19th, at St. Andrew's Episcopal Church, Uddingston, N.B., Duncan M. Bean Greig, M.B. Lond., B.A.Oxon., M.R.C.S.E., Crouch-end, London, N., to Catherine, fourth daughter of John Hendrie, J.P., Thornwood.

HIND—GODFRAY.—On Nov. 22nd, at St. Simon's Church, Jersey, by the Rev. J. J. Balleine, B.D., Incumbent, assisted by the Rev. C. M. Godfray, brother of the bride, Alfred Ernest Hind, Esq., F.R.C.S., of New-street, Jersey, to Anne Beatrice, third daughter of Charles Godfray, Esq., of Beau Séjour, Jersey.

LEWIS—HERBERT.—On Nov. 25th, at St. Paul's, Onslow-square, Percy George Lewis, M.D., eldest son of Henry Lewis, M.D., of Folkestone, to Hester Minnie, youngest daughter of the late Nicholas Herbert, Esq.

RANDLE—DAVIES.—On Nov. 19th, at Lagos, W. C. Africa, John Randle, M.R.C.S., Assistant Colonial Surgeon, to Victoria, eldest daughter of Capt. J. P. L. Davies, of Lagos.

STEWART—FORBES.—On Nov. 19th, at St. Mary's Church, Dundee, Charles William Stewart, M.A., M.D. Glasgow, to Jane Russell, eldest daughter of R. S. Forbes, Dundee.

DEATHS.

ALLCHIN.—On Nov. 24th, William Henry Allchin, M.B. Lond., formerly of Bayswater, in his 74th year.

ARMSTRONG.—On Nov. 20th, at Greenstreet Green, near Dartford, John Armstrong, M.D., J.P., formerly of Gravesend, aged 85.

BATE.—On Nov. 20th, at Southey-road, South Wimbledon, John Frederick Bate, Surgeon R.N., aged 28.

DOUGLAS.—On Nov. 25th, suddenly, at Morpeth, Edwin Douglas, L.R.C.P., L.R.C.S.Edin.

HARDING.—On Nov. 20th, at his residence, Eaton-rise, Ealing, William Harding, F.R.C.S., formerly of Percy-street, W., aged 81.

MCGILL.—On Nov. 21st, 1890, at Wonoak, Harrogate, Arthur Fergusson McGill, F.R.C.S., one of the surgeons to the General Infirmary at Leeds.

NEWHAM.—On Nov. 18th, at Winslow, Bucks, Thomas Newham, M.D., aged 63.

PALK.—On Oct. 11th, at Potchefstroem, Transvaal, South Africa, Robt. Palk, M.D., of Ashburton, Devonshire, in his 77th year.

SHAPTER.—On Nov. 13th, at Gordon House, Exmouth, Lewis Shapter, M.D., late of Exeter, aged 42.

WEIR.—On Nov. 22nd, at Royal-terrace, Edinburgh, Walter Weir, M.B., C.M., F.R.C.P. Edin., F.R.M.S. Lond., of Upper Norwood, youngest son of the late R. M. Weir, Edinburgh, aged 35.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, December 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. W. Lang: External Diseases of the Eye. New Infirmary, Paddington: 4 P.M., Dr. Cheadle: Clinical Lecture on Medical Cases. 5 P.M., Dr. Savill: Pathological Demonstration.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Dr. B. W. Richardson: Hæmorrhage following Tooth Extraction, its Cause and Treatment.—Mr. Storer Bennett: A Description of some interesting Specimens of Comparative Dental Pathology at present in the Society's Museums. Casual Communications:—Mr. Trueman: A case of Eruption of a Tooth under the Chin.—Mr. J. O. Butcher will show New Dental Engine Attachments.

ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Conversazione.

SOCIETY OF ARTS.—8 P.M. Prof. Vivian B. Lewes: Gaseous Illuminants. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Messrs. Bernard Pitts and William F. Brook: The Treatment of Stenosis of the Larynx and Trachea following Tracheotomy, with Remarks on the Present Position of Intubation. Cases will be shown.

Tuesday, December 2.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electrotherapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Diseases of Skin, Blackfriars: 4.30 P.M., Dr. Payne: Syphilitic Affections of the Skin.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Dr. W. Russell: The Characteristic Organism of Cancer.—Dr. W. K. Sibley: Non-contagiousness of Cancer.—Dr. Maguire: Acute Verrucose Aortitis.—Dr. S. West: Pylephlebitis.—Mr. James Berry: Femur after Osteotomy.—Dr. Rolleston: Lipoma of Liver (?Appendix Epiploica). Card Specimens:—Prof. Crookshank: Leprosy Bacillus.—Dr. Westbourn: Streptococcus of Erysipelas.—Mr. W. G. Spencer: (1) Eyes of a Cat with Purulent Conjunctivitis; (2) Double Pyo-salpinx with Purulent Vaginitis from a Dog; (3) Bony Plates in Dura Mater pressing on Spinal Cord and causing Paraplegia.—Mr. W. E. Wynter: Primary Carcinoma of Fallopian Tube.

Wednesday, December 3.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Kingston Fowler: The Physical Diagnosis of Diseases of the Lungs and Pleura. Royal London Ophthalmic Hospital: 8 P.M., Mr. R. M. Gunn: Ophthalmoscopic Cases.

OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. Aust Lawrence, Dr. Dakin, Mr. Meredith, and others. Dr. Aust Lawrence: Note on the Operation for Restoring the Perineal Body in Complete Rupture of the Female Perineum.—Dr. Percy Boulton: The Purse-string Suture, its Use in Complete Rupture of the Perineum.—Dr. Napier: Habitual Abortion.

SOCIETY OF ARTS.—8 P.M. Mr. J. Dredge: The Chicago Exhibition, 1893.

Thursday, December 4.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

LONDON POST-GRADUATE COURSE.—National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Beevor: Paralysis Agitans. Hospital for Sick Children, Gt. Ormond-st.: 4 P.M., Dr. Abercrombie: Hydrocephalus.

HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Dr. Champneys: Painful Menstruation.

Friday, December 5.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Kingston Fowler: The Physical Diagnosis of Diseases of the Lungs and Pleura.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (Board-room, West London Hospital).—8 P.M. Clinical Evening. Mr. E. G. Stocker will show a Series of Cases of Fractured Patellæ successfully treated by Wiring.—Mr. F. S. Edwards: Rectal Cases.—Mr. R. F. Benham: Two cases of Localised Peritonitis; an enormous Spina Bifida in a Girl aged fifteen.—Mr. C. B. Keetley: (1) A case of Dislocated Semilunar Cartilage; (2) Excision of Appendix Vermiformis.—Dr. Crombie: A case of Scleroderma.—Dr. Clippingdale: A case of Congenital Eruption and Discolouration in Nerve Tracks.

Saturday, December 6.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department 9.15 A.M.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 27th, 1890.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Nov. 21	30·24	S.W.	51	49	60	58	49	·01	Overcast
,, 22	30·17	W.	46	43	71	58	43	·09	Bright
,, 23	29·65	W.	48	46	60	59	44	·10	Cloudy
,, 24	29·27	N.W.	47	44	60	50	44	·12	Cloudy
,, 25	29·60	W.	36	35	55	44	35	·05	Foggy
,, 26	30·12	N.E.	32	..	47	44	31	..	Bright
,, 27	29·99	N.E.	30	..	37	32	27	..	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

"CANCER MORTALITY AMONGST JEWS."

To the Editors of THE LANCET.

SIRS,—In an annotation in your issue of Nov. 8th, I observe that a lecturer at Owens College, Manchester, is alleged to have stated "that no Jew or Jewess has ever been known to suffer from cancer." Having been in practice here for the last twenty years, and as the most of my practice is, and has been, amongst the Jewish community, I can assert that cancer does occur amongst the Jews, and, in my experience, just as frequently as in persons of other religions. It is only six months since I had a Jew male under my care, suffering from a large epithelioma, developed upon the cicatrix of a lupoid ulcer. I wished to remove the growth, but the man declined. He then went to Constantinople for further medicinal cure, and there he died some two months since. At this moment I have under my care an old Spanish Jewess suffering from a hard scirrhous tumour of the pylorus and lesser curvature of the stomach. She is seventy years of age, and has suffered from the malady for over two years. Last year I excised from the lip of a Jew, who came to me from Varna, an epithelioma, and at the time with apparent success. But I afterwards heard that the disease reappeared in the glands of the neck, and the man died. Suffice it to say that were I to go back over my visiting lists, I could give many more instances of cancer among Jews.

Had the statement been that the Jew males suffered less from chancre than males of the Christian races, it would have been correct. This is to be attributed to the cleanliness arising from their religious operation of circumcision. I have found very few cases of chancre amongst the Jew males; but gonorrhœa, I should say, is as prevalent amongst them as amongst any other religious sect.

I am, Sirs, yours truly,

A. IRWIN BOLTON, M.B., A.B.

Kustendjie, Roumania, Nov. 15th, 1890.

TELEGRAMS TO MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—I think the enclosed statement and official letter will be of interest to the readers of THE LANCET.

On Oct. 30th I received a telegram from a well-known surgeon at Blackheath, asking me to fix an hour in the afternoon for meeting him. I replied by telegram to the address given in the Medical Directory, and in an hour had a notice from the Post office to say the address was insufficient. At great inconvenience I went round to Vere-street, and showed the postmaster the Medical Directory. He said I must telegraph to the postmaster at Blackheath to say the address was correct. This I did, and went down in the afternoon, only to find that my telegram had *never been delivered*, and that my friend had actually sent me another telegram from the office where the answer was lying! After nearly a month's delay I got the enclosed answer, which shows that a public body like the Post-office allows itself to be influenced by private pique, but has at last acknowledged its folly and amended its ways.

I am, Sirs, yours obediently,

Cavendish-square, W., Nov. 25th, 1890. CHRISTOPHER HEATH.

"General Post-office, London, Nov. 24th, 1890.

"SIR,—With reference to your letter of the 30th ultimo, I beg leave to inform you that, in the case of telegrams for suburbs of London, which, like Blackheath, are situated in the delivery of several telegraph offices, it is necessary that the addresses of the telegrams should contain the name of some street or road, in order that the proper delivery office may be indicated to the telegraphists at the Central Telegraph Office. When the address does not contain this indication, it is the practice of the Department to forward the telegram to the office from which the greater part of the suburb is delivered. If the message prove not to be in the delivery of that office, but the proper delivery office, as is often the case, happens to be known there, the telegram is redirected, and a redirection fee has hitherto been charged on delivery in all such cases for the extra service thus involved. This course would have been taken in regard to the telegram in question, which was addressed merely 'Stainton Lodge, Blackheath,' if the addressee had not on a former occasion refused to pay the charge for redirecting a telegram from Blackheath Village office to the Eastcombe-terrace office. He was then warned that any future telegrams addressed merely 'Stainton Lodge, Blackheath,' would not be redirected. Under these circumstances the department cannot admit blame as regards the non-delivery of the message.

"It should, however, be stated that since the date of this telegram the department has decided to redirect free of charge in cases where the address of the telegram would be sufficient to ensure the delivery of a letter, and any future telegram addressed to Stainton Lodge, Blackheath—a sufficient postal address,—will therefore be redirected from Blackheath Village branch office to the office at Eastcombe-terrace free of charge. "I am, Sir, your obedient servant,

"C. Heath, Esq., F.R.C.S., &c." "J. H. BISCOE.

R. N. H.—Friedheim (*Archiv. f. Dermat. u. Syph.*, 1889) found that the gonococcus was destroyed by a solution of corrosive sublimate of the strength of 1 in 10,000, and that permanganate of potash in a solution of 1 in 3000 had an appreciable, but not permanent, effect. We are unaware of any similar experiments with regard to Lustgarten's bacillus (syphilis).

Inquirens.—From ten to thirty minims; the ammonia being diluted to 1:2 or 1:4.

"NETTLERASH."

To the Editors of THE LANCET.

SIRS,—I notice that "M.B. 1874" asks if anyone can suggest a cure for recurrent nettlerash. About ten years ago I remember a similar appeal from a practitioner about his little girl. I suggested then sewer air as the cause, and he replied that in consequence of this hint he called in a sanitary surveyor, and found that his house had every sanitary defect that a house could have. No doubt his patients have profited by his home-acquired experience. But there are three other very common causes of urticaria not usually, I think, described in classic works on skin diseases. The first is repeated absorption of pus débris—i.e., passive septicæmia; the second is absorption of ptomaines from the intestine; and, lastly, Unna of Hamburg has shown that the microbe of ordinary dandruff will keep in existence a nettlerash which otherwise might die out. I am, Sirs, yours faithfully,

Seymour-street, W., Nov. 24th, 1890. EDWARD BLAKE.

To the Editors of THE LANCET.

SIRS,—In your last issue "M.B. 1874" asks for suggestions as to the treatment of nettlerash in the case of his little girl. Your correspondent will know what a multiplicity of remedies there are for this affection, and how difficult it sometimes is to select the right one. In this particular instance I would suggest the trial of quinine, as follows:—Quinæ sulph., gr. i.; acid sulph. dil., ℥x.; aq., ʒii.; cap. ʒi. bis die. Two other remedies which might be tried are colchicum and liq. potassæ. I am, Sirs, yours faithfully,

Nov. 23rd, 1890. G. HERRING.

To the Editors of THE LANCET.

SIRS,—In answer to the letter of your correspondent, "M.B. 1874," I should advise him to give his daughter a few grains of salicylate of soda three times a day. I have found this a most useful drug in obstinate cases of nettlerash. I should also apply externally some oleate of zinc, with a few drops of carbolic acid mixed with it. This treatment he should continue until the rash has disappeared.

I am, Sirs, yours faithfully,

Ilfracombe, Nov. 23rd, 1890. A. VICTOR DYER.

BEETHOVEN'S DEAFNESS.

"A THOUSAND times worse off is the deaf man than the blind," says Paolo Mantegazza; and the greatest aurist of the century has given peculiar emphasis to the fact that "deafness exerts a hurtful influence on the individual's mode of living, of working, and of thinking." Beethoven, according to the most recent Italian authority on the "Hygiene of the Ear"—Beethoven, the musician and poet *par excellence*, the genius of passion—knew all the anguish of this moral death, and some of his masterpieces are but an echo of his sufferings a wail of supreme bitterness, but of the divinest melody. His predilection to solitude, says his biographer, Fétis, began to betray itself in 1796, the year in which he first became sensible of having entered on the down-grade of deafness—a deafness which defied all remedial effort, till it finally increased and intensified, so as to deprive him completely of the pleasure of hearing his own music. In the will he made in 1802, leaving everything to his two brothers, it is manifest that his despair had reached its acme, insomuch that he shunned mankind rather than betray his deafness, and was more than once driven to the verge of suicide from an almost uncontrollable impulse to end his days. This privation he had worked himself into thinking a "dishonour to a musician." He declared that it cost him acute agony to let his deafness be perceived. The very day on which, before an immense audience at Vienna, he executed his fifth symphony (*quinta sinfonia*), the assemblage acclaimed him with the most vociferous enthusiasm. Beethoven himself, who had directed the orchestra, remained motionless, when one of his performers pushed him gently forwards and turned him so as to face the audience and see the enthusiasm he had evoked. The public then recollected that the genius they were applauding, to whom they owed such indescribable pleasure was stone-deaf. Beethoven burst into bitter tears.

THE PREVALENCE OF COPPER IN CEREALS.

To the Editors of THE LANCET.

SIRS,—The occasional existence of copper in cereals—peas, beans, &c.—as a natural constituent, has long been known; but as the question is a very important one, especially in this country, where copper is looked upon as an article highly injurious to health, no apology is necessary from me for drawing the attention of your readers to the subject.

The question has very lately been prominently brought under my observation, and that in a novel and unexpected manner, necessitating the examination of a large number of samples of wheat and barley, which resulted in 15 per cent. of the samples being found to contain copper in more or less quantity, particularly in the Scotch barley. The existence of copper in cereals therefore becomes a serious question, especially to manufacturers of infants food, as they are liable at any moment to have proceedings instituted against them under the Sale of Food and Drugs Act. It was due to legal proceedings being threatened against a manufacturer of infants' food which caused the matter to be placed in my hands. The plaintiff's analyst certified that the food contained lead, which had caused serious illness to an infant; but upon closer investigation by myself, it proved to be copper, and it was present there as a natural constituent of one of the cereals used in the preparation of that particular infants' food. Granting that cereals do possess the remarkable property of taking up copper from the soils in which they are grown, provided that soil contains copper, the question immediately arises, What is the maximum quantity of copper which barley or wheat are capable of taking up? Few soils in this country contain copper to any appreciable extent. I am therefore inclined to attribute the presence of copper in Scotch barley and English wheat to the prevalent practice of dressing the grain and also the ground with sulphate of copper, so as to protect it from the ravages of vermin after the grain is sown. The possible existence of copper in cereals may also account for some of those mysterious and unaccountable cases of illness which occur from time to time in families, and is therefore well worth the attention of medical practitioners, and also that of the manufacturers of infants' food.—I am, Sirs, yours truly,

WILLIAM JOHNSTONE, Ph.D., &c.

Fish-street Hill, S.E., November, 1890. Public Analyst.

"INSUSCEPTIBILITY TO VACCINATION."

To the Editors of THE LANCET.

SIRS,—"Hard-up," in your issue of Nov. 15th, raises a question that has often occurred to me—viz., as to the need of vaccinating in three or four places. In my student days in Edinburgh, Dr. Husband, the inventor of capillary tubes, always vaccinated with one large vesicle. Of late years I have, like most men, carried out the suggestions of the Vaccine Institution. Is one large vesicle as good as four small ones? That is the *crux* of the matter.—I am, Sirs, yours faithfully,

Devonshire-street, W., Nov. 20th, 1890. W. TOWERS-SMITH.

COOKED OR UNCOOKED MEAT.

To the Editors of THE LANCET.

SIRS,—I shall feel deeply obliged if any of your readers can give me any reliable guide, or point out where such may be obtained, which may enable one to judge whether any cooked or uncooked meat is (1) English fed and killed; (2) foreign fed, but killed in England; (3) foreign killed, and sent to England frozen.—Yours faithfully,

Hanwell, Nov. 18th, 1890. PERCY J. BAILY.

NEALE'S MEDICAL DIGEST.

To the Editors of THE LANCET.

SIRS,—I read in a recent issue of THE LANCET that a new edition of Dr. Neale's "Digest" will only be sent to press when a sufficient number of subscriptions have been received to secure the publishers against pecuniary loss. Will you allow me through your columns to urge those of your readers who are intending to subscribe to do so without delay, as it is our common interest for the book to appear; and I know by experience that on occasions of this kind one is apt to put off writing the few necessary lines, and so the whole affair is often forgotten, and the proposed work tardily or never accomplished. The "Medical Digest" is invaluable to the busy practitioner, who possesses in it an index of symptoms and of therapeutics, besides a record of everything curious or unusual that has occurred in modern times in the whole range of medicine. To those who are engaged in literary or scientific work it is equally useful, facilitating bibliographical research, and often furnishing by itself all the information required, as far as it goes. Workers must, however, have been looking forward to a new edition up to date; and now that the conditional promise is made, it is to be hoped that their prompt response will encourage the publishers to proceed with the work. I am, Sirs, yours truly,

Rue Marbeuf, Champs Elysées, Paris. OSCAR JENNINGS, M.D.

Mr. J. H. Potter.—We are not prepared to adopt the suggestion of our correspondent. The matter is one that cannot be said to fall within the province of a medical journal.

J. D. M.—The most recent observations on the point are by Dr. Senn of Chicago, and are to be found in his "Intestinal Surgery," pp. 12 *et seq.*

Mr. S. Nusservicauzee (Satara).—We take no notice of secret remedies.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Fletcher Beach, Dartford; Sir Morell Mackenzie, London; Dr. H. Rutherford, Glasgow; Dr. Champneys, London; Dr. Grün, Berlin; Sir P. Eade, London; Dr. H. M. Murray, London; Dr. Garson; Mr. C. E. Hoar, Maidstone; Dr. Galloway; Dr. Clouston, Edinburgh; Dr. Alexander, Halifax; Mr. G. F. Blake, Dublin; Dr. Griffith, London; Dr. Orr, Wanstead; Mr. S. M. Burroughs, London; Mr. W. G. Tiley, Melton Mowbray; Dr. Dobie, Coldstream; Mr. Stewart, Clifton; Dr. Dabbs, Shanklin; Dr. G. Fleming, St. John's; Mr. J. Long; Dr. T. Dutton, London; Dr. Larsen, Copenhagen; Mr. Steel, Glasgow; Mr. Quinton, Wandsworth; Dr. Lycett Burd, Shrewsbury; Dr. Guttman, Berlin; Dr. Prichard, Lancaster; Dr. Thresh, Chelmsford; Messrs. Krohne and Sesemann, London; Mr. S. Plimsoll, London; Messrs. Crossley and Co., London; Dr. Bowie, Blantyre; Messrs. Woolley, Sons, and Co., Manchester; Dr. H. O. Cowen, Ayr; Messrs. Whittingham and Sons, London; Mr. Stewart, Whitby; Mr. Engelbach; Mr. Harrison Cripps, London; Mr. Craig, Birmingham; Dr. Roche; Dr. Lauder Brunton, London; Dr. Limont, Newcastle-on-Tyne; Messrs. W. and W. H. Stead, Blackwall; Mr. Stilliard, Birmingham; Messrs. Mertens and Co., London; Dr. Ashby, Manchester; Messrs. R. A. Knight and Co., London; Dr. Welch, Selanjor; Mr. V. Dyer; Messrs. Robertson and Scott, Edinburgh; Dr. Menzies, Brighton; Mons. Grandpré, Port Louis; Mr. W. H. Bennett, London; Dr. Sainsbury; Messrs. Griffin and Co., London; Dr. Mackinnon, Damascus; Messrs. Oliver and Boyd, Edinburgh; Mr. J. H. Potter, Cullumpton; Dr. Honey, Stoke Devonport; Mr. R. Johnson, London; Mr. W. P. Granville, Stroud Green; Dr. E. Blake, London; Dr. Bossano, Marseilles; Dr. Towers Smith, London; Dr. E. Pfeifer, Wiesbaden; Messrs. Mottershead and Co., Manchester; Mr. H. Eales, Birmingham; Dr. Steels, San Remo; Mr. F. S. Eve, London; Mr. Aston, Bradford; Messrs. Segg and Co., London; Dr. Kennefick, co. Tipperary; Messrs. Blondeau et Cie., London; Mr. L. Mark, London; Dr. Hunt, Perth; Dr. Edgar Stevenson, Strassburg; Mr. Ferguson, Portobello; Messrs. Cox and Co., Brighton; Mr. Saxon, London; Mr. Blount, Paris; Mr. Yeates Hunter, London; Dr. B. Richardson, London; Messrs. Mitchell and Co., London; Mr. Large, London; Dr. Balfour, Belford; Dr. Glover Lyon, London; Mr. L. Thompson, Sydney, N.S.W.; Messrs. Maw and Son, London; Mr. Nodes, Russell-square; Dr. Macindoe, Market Drayton; Mr. Stenhouse, Glasgow; Mr. Prince, Bexhill; Dr. Davies, Maidstone; Mr. Christie, Stafford; Mr. Hobson, Beverley; Mr. H. Sell, London; Mr. Vickers, London; Mr. Pratt, Derby; Mr. Fulker, Bournemouth; Mr. Ridge, Enfield; Dr. Leach, Dorset; Mr. Dunne, Ballacolla; Mr. Cartman, Manchester; Dr. Macdonald, Dorchester; Mrs. J. B. Martin, London; Messrs. Allen and Hanburys, London; Mr. Warner, Sheffield; Mr. Hardie, Manchester; Mr. O'Neilly, Dunmore; Mr. Russell, Liverpool; Mr. Stalland, Worcester; Dr. Walter, Manchester; Mr. Arnison, Penrith; Mr. Mason, Sheffield; Western Dispensary, London; Enquirer; C. H. T., London; Secretary, Victoria Hospital for Women, Chelsea; W. Z., London; Secretary, Hospital for Women, Leeds; M.R.C.P., London; C.; Sells, London; One who has Suffered; Lex, Bristol; D., Southsea; Secretary, Jessop Hospital for Women, Sheffield; Salopian; Sanitas Co., London; Urbanus, London.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. F. Treves, London; Mr. O'Meara, Loughboro'; Mr. Brown, Usk; Messrs. Gale and Co., London; Mr. Silver, Henley-on-Thames; Mr. Nevill, South Devon; Dr. Evans, Anglesea; Dr. Grant, London; Dr. Hassall, San Remo; Mr. Taylor, London; Mr. Miles, Plympton; Mr. Webb, King's County; Dr. Lyons, Belfast; Mr. Gray, Leigh; Messrs. Burgoyne and Co., London; Mr. Thompson, Westmoreland; Mr. Nicholls, Bury St. Edmunds; Dr. McClean, Walthamstow; Mr. Douglas, Matlock Bridge; Mr. Hugo, Reading; Dr. Tetley, Salop; Mr. Hodder, County Cork; Mr. Tully, Hastings; Dr. Sankey; Messrs. Brown, Gould, and Co., London; Dr. Wilson, Mitchelstown; Miss Crewhall, Durham; Mr. Horner, Tonbridge; Dr. Holmes, Warwick; Mr. Purland, Woolwich; Dr. Adams, London; Mr. Thin, Edinburgh; Dr. Fernandez, Natal; Mr. Cheetham, Leicester; Mr. Moss, Accrington; Mr. Dykes, Hamilton; Dr. Duley, Blackpool; Mr. Gwynne, Denton; Mr. Tyte, Minchinhampton; Mr. Bowman, Darlington; Mr. Orchard, Nottinghill; Mr. Hardie, Manchester; Mr. Hoffman, Swansea; Mr. Lewis, Swansea; Mr. Colman, Wilts; Mr. Cowan, Wigan; Messrs. Schweitzer and Co., London; Mr. Heywood, Manchester; Dr. Sutcliffe, North Devon; Dr. Keser, London; Mr. Harries, Shrewsbury; Mr. Hawkes, Launceston; Mr. Popham, London; Mr. Mercier, Catford; Mr. Todd, Selby; Mr. Lambkin, Fulham; Mr. Fuggle, St. Albans; F., London; Dr. F., Brighton; A. B. C., London; Truth, London; The Knitting Co., Kidderminster; R. M. A., London; Delta, Sheffield; Z., Upper Clapton; Rus, London; Medicus, London; Secretary, Wenford House Hospital, Exeter; Rex, Birmingham; Dant; Secretary, Royal Eye Infirmary, Manchester; F., London; Medicus, Haslemere; Dahl's Agency, London; X. L., London; Cantab, London; D., London; The Clerk, Hartlepool Union; Secretary, General Hospital, Tunbridge Wells; Ligature, Edinburgh; Pinus, London; Travel, London; Leeds Nurses' Institute; Doctor, Edinburgh; M.R.C.S., London; Sister Mary, London; Phlox, London; Oxalis, London; Perth Sick Poor Nursing Association; Yorkshire, London; A. H., Manchester; Sister Musgrave, Bolton; A. N., London; X., London; Excelsior; *Northern Whig*, Belfast; C. E. B., London; Graduate, Highgate; A. B., High Holborn; Percy, London; R. C., London; D., Southsea; Cygnet, London; A. B., London; Spes, London; F. W. L., London; Salix, London; D. A., London; X. L., London; X. Y., London.

NEWSPAPERS.—*Buffalo Courier, North Wales Observer, Essex Standard, Somerset City Herald, Blackburn Standard, Huntley Express, Manchester City News, Huddersfield Examiner, Toronto Mail, Temperance Chronicle, Durham Chronicle, Glasgow Herald, Builder, Newcastle Leader, Cambridge Independent Press, Kent Herald, Financial Times, Builders' Reporter, Surrey Advertiser, Architect, Reading Mercury, Spectator, Law Journal, City Press, Weekly Free Press and Aberdeen Herald, West Middlesex Advertiser, Windsor and Eton Gazette, Mining Journal, Manchester Examiner, Magazine and Book Review, National Reformer, Wellingboro' News, Sydney Daily Telegraph, Galignani's Messenger, Bombay Gazette, Jackson's Journal (Oxford), Hertfordshire Mercury, &c.*, have been received.

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